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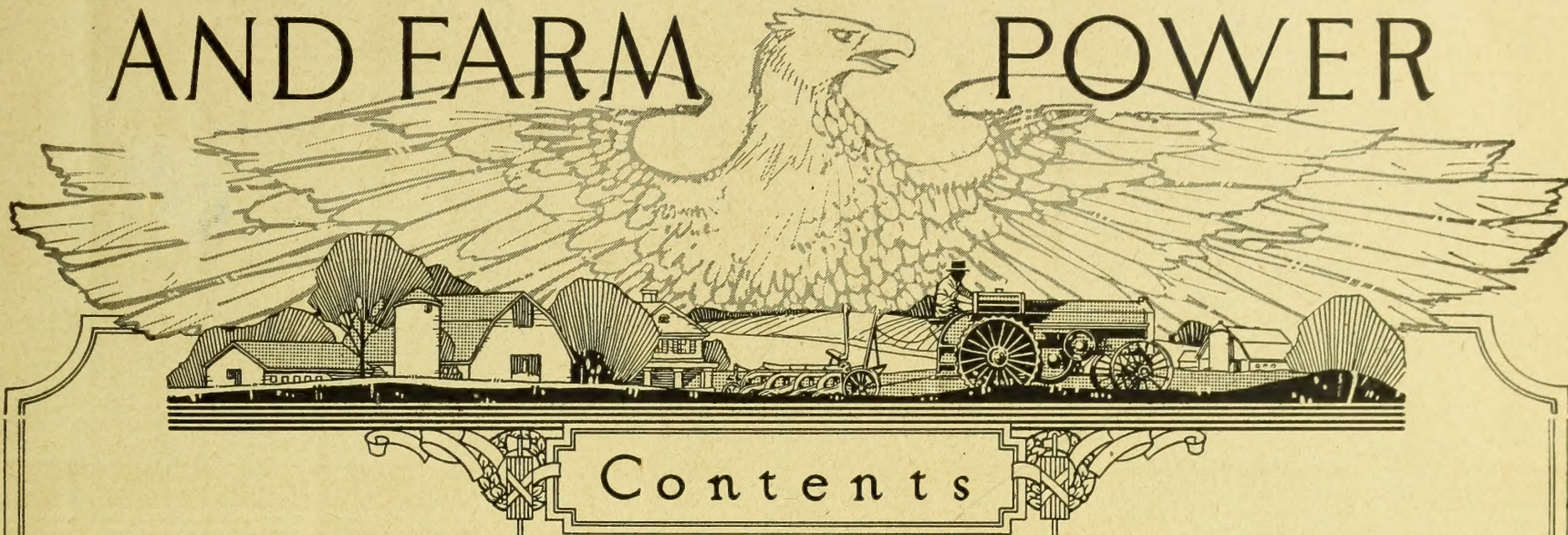
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The AMERICAN THRESHERMAN AND FARM POWER

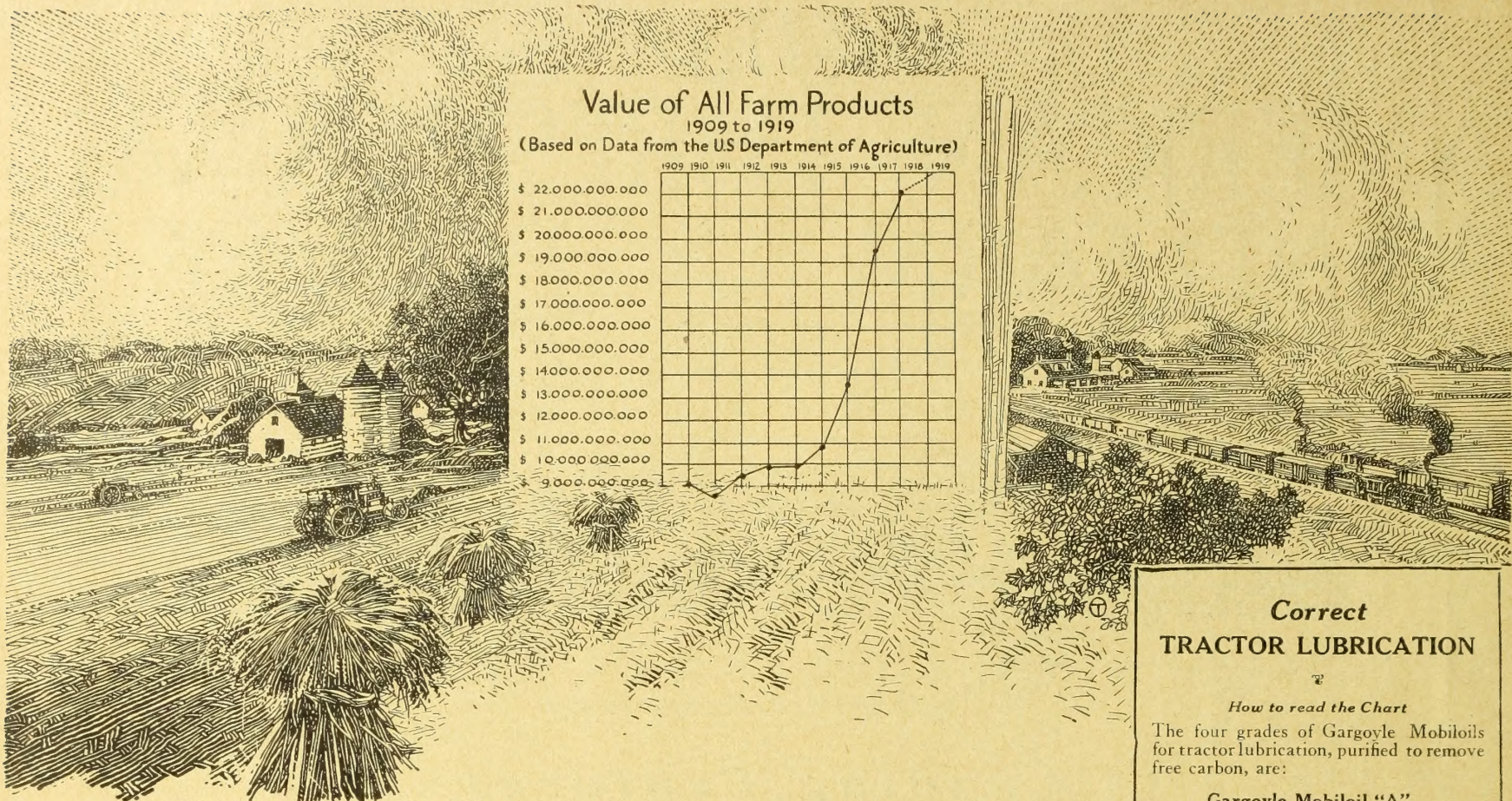


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Factory Methods on the Farm

WITH few exceptions the food of the world comes from the fields. The last few years have emphasized that fact.

Farms have become factories for transforming the richness of the fields into food. The adoption of factory methods has substituted machines whenever possible to do the work of men and beasts.

Tractors are increasing in numbers. They are doing more and more of the work of horses. They hold their own faster working pace for longer hours.

But—

Just as horses need care and attention to preserve their strength and stamina, so the tractor needs correct lubrication to develop its full power for production, to develop its greatest number of years of usefulness.

When the tractor is correctly lubricated it requires less fuel and less oil. The wear of moving parts is reduced. The full power of the tractor

is free for productive work. Power is not wasted in overcoming excessive friction.

You can measure the unnecessary wear of excessive friction. It cuts down the useful life of the tractor to a considerable extent, to say nothing of the loss of the tractor's use when renewal of parts and repairs are necessary. But given proper mechanical attention and scientific lubrication, the life and usefulness of the tractor are often increased three-fold.

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A grade for each type of motor

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VACUUM OIL COMPANY, New York, U. S. A.

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Correct TRACTOR LUBRICATION

How to read the Chart

The four grades of Gargoyle Mobiloils for tractor lubrication, purified to remove free carbon, are:

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- Gargoyle Mobiloil "BB"
- Gargoyle Mobiloil Arctic

In the Chart below, the letter opposite the tractor indicates the grade of Gargoyle Mobiloils that should be used. For example, "A" means Gargoyle Mobiloil "A", "Arc" means Gargoyle Mobiloil Arctic, etc.

This Chart is compiled by the Vacuum Oil Company's Board of Engineers and represents our professional advice on correct Tractor Lubrication.

TRACTORS	1918 Models		1917 Models		1916 Models		1915 Models	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Albough-Dover (Square Turn)	BB	A	BB	A	BB	A	BB	A
Alis-Chalmers (General Purpose)	BB	A	BB	A	BB	A	BB	A
All Work	B	A	B	A	B	A	B	A
Appleton	BB	B	BB	B	BB	B	BB	B
Aultman-Taylor (18-36)	B	A	B	A	B	A	B	A
" (22-45)	BB	A	BB	A	BB	A	BB	A
" (15-30) (Waukesha)	BB	A	BB	A	BB	A	BB	A
Avery " (5-10 H.P.) (Louisville)	B	A	B	A	B	A	B	A
Bates Steel Mule	B	A	B	A	B	A	B	A
Bean Track-Pull	B	A	B	A	B	A	B	A
Big Bull	B	A	B	A	B	A	B	A
Buckeye (Ohio)	B	A	B	A	B	A	B	A
Case " (9-18)	B	A	B	A	B	A	B	A
" (10-20)	BB	A	BB	A	BB	A	BB	A
" (12-25)	BB	A	BB	A	BB	A	BB	A
" (20-40)	BB	A	BB	A	BB	A	BB	A
Cleveland	BB	A	BB	A	BB	A	BB	A
Coleman	B	A	B	A	B	A	B	A
Common Sense	BB	A	BB	A	BB	A	BB	A
C. O. D.	BB	A	BB	A	BB	A	BB	A
Craig	BB	A	BB	A	BB	A	BB	A
Crescent Grip	BB	A	BB	A	BB	A	BB	A
Emerson-Brantingham (EB) 9-16 (EB)	B	A	B	A	B	A	B	A
" (Big Four) (Reeves)	B	A	B	A	B	A	B	A
Four City (Heavy Duty)	B	A	B	A	B	A	B	A
Fordson	A	A	A	A	A	A	A	A
Gas Pull (Rumely Co.)	BB	A	BB	A	BB	A	BB	A
Grain Belt	BB	A	BB	A	BB	A	BB	A
Happy Farmer (Model B)	B	A	B	A	B	A	B	A
Hart Parr	BB	A	BB	A	BB	A	BB	A
Header	BB	A	BB	A	BB	A	BB	A
Hession	BB	A	BB	A	BB	A	BB	A
Holt Caterpillar	BB	A	BB	A	BB	A	BB	A
" (Model 45)	B	A	B	A	B	A	B	A
" (Model 18)	B	A	B	A	B	A	B	A
Illinois	B	A	B	A	B	A	B	A
Indiana	BB	A	BB	A	BB	A	BB	A
K. C. Prairie Dog	B	A	B	A	B	A	B	A
Kinard	B	A	B	A	B	A	B	A
La Crosse	B	A	B	A	B	A	B	A
Lauson	BB	A	BB	A	BB	A	BB	A
Liberty	B	A	B	A	B	A	B	A
Lightfoot	BB	A	BB	A	BB	A	BB	A
Minneapolis	BB	A	BB	A	BB	A	BB	A
Mogul (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
" (8-16) (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A
National	BB	A	BB	A	BB	A	BB	A
Nevership	B	A	B	A	B	A	B	A
" (20-12)	B	A	B	A	B	A	B	A
" (30-18, 10-6)	BB	A	BB	A	BB	A	BB	A
New Age	BB	A	BB	A	BB	A	BB	A
Nilon	BB	A	BB	A	BB	A	BB	A
Oil Pull (14-28, 10-20) (Rumely Co.)	BB	A	BB	A	BB	A	BB	A
" (20-40) (Rumely Co.)	BB	A	BB	A	BB	A	BB	A
" (12-20, 16-30) (Rumely Co.)	BB	A	BB	A	BB	A	BB	A
" (Rumely Co.)	BB	A	BB	A	BB	A	BB	A
Parrett	B	A	B	A	B	A	B	A
Pioneer	B	A	B	A	B	A	B	A
Plow Boy	BB	A	BB	A	BB	A	BB	A
Plow Man	BB	A	BB	A	BB	A	BB	A
Port Huron	B	A	B	A	B	A	B	A
Royer	B	A	B	A	B	A	B	A
Rumely (8-16)	BB	A	BB	A	BB	A	BB	A
Russell	BB	A	BB	A	BB	A	BB	A
" (Giant)	BB	A	BB	A	BB	A	BB	A
Sandusky	BB	A	BB	A	BB	A	BB	A
Titan (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Townsend	BB	A	BB	A	BB	A	BB	A
Turner	BB	A	BB	A	BB	A	BB	A
Trunddar	BB	A	BB	A	BB	A	BB	A
Twin City	B	A	B	A	B	A	B	A
" (Model 15)	BB	A	BB	A	BB	A	BB	A
" (Model 16)	BB	A	BB	A	BB	A	BB	A
" (Model 12-30)	B	A	B	A	B	A	B	A
Velic	B	A	B	A	B	A	B	A
Wallis Cub (Junior)	BB	A	BB	A	BB	A	BB	A
Waterloo Boy	BB	A	BB	A	BB	A	BB	A
Whitney	BB	A	BB	A	BB	A	BB	A
Wiscasset	B	A	B	A	B	A	B	A

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FAYNE

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, MAY, 1920.

No. 1.

Custom Threshing as a Business

CUSTOM threshing is a business different from that of plowing, sowing and reaping.

It is a line of work requiring a different sort of skill from that of producing a crop from the soil. The equipment necessary for doing a large amount of threshing, as the successful thresherman must do, is far too expensive for the farmer to own for his individual use. Since the advent of improved farming methods, grain production has become so extensive that the task of threshing it years ago grew into a distinct business with a good many men devoting most of their time to that specialty of farm work. Threshing has thus come to be a business with many thousands of dollars invested in threshing equipment. All this machinery has been purchased from the manufacturers and placed in the grain producing sections of the country as a business enterprise.

When a man purchases an outfit and starts out to do custom threshing in a community of farmers, he is immediately confronted with the question of winning or losing in a business sense, that is, making his business a profitable one. To say the least there is little or no pleasure in following a rig year after year. Profit over all items of expense is therefore the goal to be reached. In a good many cases the thresherman has a hard pull to get his work done each year and at the end of the season be able to figure a nice profit clear of all expense from labor, repairs, interest on the investment, depreciation, taxes, etc. He has a good many odds to fight against in the way of poor crops and wet seasons. Unless he keeps a very close tab on every detail of the business he is making good

full account all the factors that enter into his business. He must see them clearly and comprehensively. In threshing, as in every other business, there are certain fundamental principles that cannot be disregarded.

In the first place he must have a thorough and complete understanding of the business in detail. Next to that he must have a good outfit of machinery, that is, one that is in a good state of repair, but not necessarily a new rig. It must be ready for business when it goes to the field for the first job, and be kept in that condition just as

unnecessary wasting of grain and prevent the mechanical injury to any part through neglect. This not only safeguards the machine and the farmer's grain but it helps as nothing else can in the matter of maintaining a good reputation in his community. It is not only a profitable practice but is rightfully a part of his job and is what he is paid for, as well as putting the grain into the wagon.

The constant aim of the successful thresherman is to establish a feeling of good will toward himself and a firm confidence in his word and integrity.

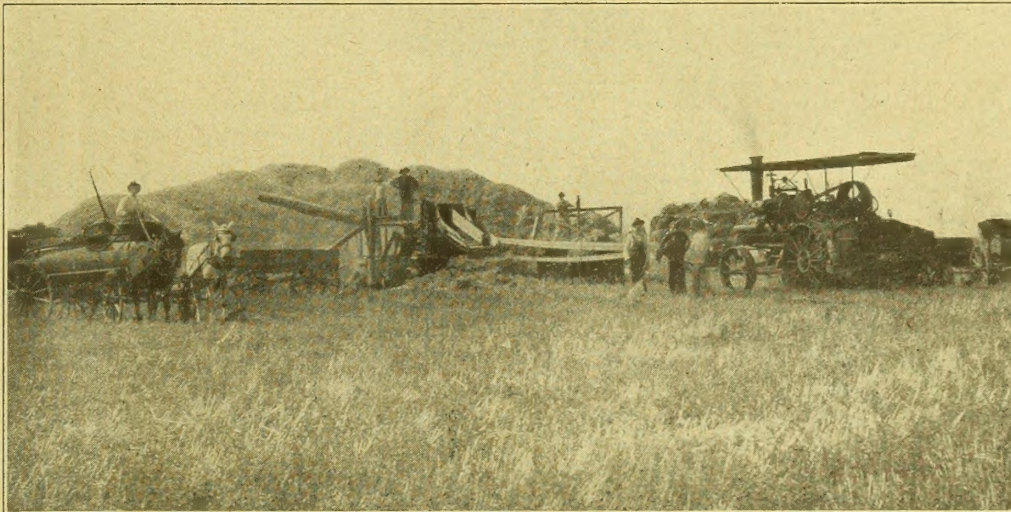
This is a business asset that he cannot afford to miss. He must be reliable in that when he promises to do something or be at a place at a stated time, he can be relied upon to do it without fail, unless some unforeseen circumstances make it impossible. Misunderstandings will arise at times, and cannot be avoided, but farmers soon learn to know whom they can depend on for good grain measure and a square deal in general.

Threshing as a business has a good many ups and downs and when a man buys an outfit he must stake his capital on the final outcome of conditions, many of which, such as crop failures, and wet seasons, are entirely beyond his control. These and many other factors directly

concern his business in a vital manner and when all taken together requires a very careful attention if he does justice to his own interests. Also labor, repairs, depreciation, interest on the investment, and miscellaneous expense items, are constantly eating into his receipts and unless he gets a fair, reasonable price for his work he will surely face a substantial loss of profit. But this can usually be avoided if careful attention is given to the matters of securing a good line of jobs, repairing of the outfit, and getting a price that is sufficient to enable him to make a nice profit. These three things are of the utmost importance and must not be neglected in any detail, for they are fundamental and outstanding factors that make for success.

The securing of a good season's work in a grain growing community is a simple matter for the wideawake thresherman with a good machine.

(Continued on page 70.)



I am sending you fourteen new subscribers to The American Thresherman and Farm Power. I am also sending you a picture of my outfit. I have threshed for fifteen years, run this engine every year, had three different separators and I like this one best of all.

Wheatland, Wyoming.

ERNEST GREENLEE.

(Bless your faithful soul. It's this kind of assistance that would soon double the circulation, and enable us to spread the gospel to the "Uttermost ends of the Nation." If all our readers could only realize what a help just one new subscriber means from each old one, Sil's hardest labors would soon be over. Give us one hundred thousand subscribers and we'll give you returns a hundred fold greater than ever before.—Old Sil.)

nearly as possible throughout the season's work. Without an outfit of quality, that does quality work, he cannot gain the best jobs in his territory nor hold that work for a consecutive number of years. The machine must do a good grade of work, save a high percentage of the grain and clean the grain that goes into the wagon. If the outfit is in good shape this will not be difficult at

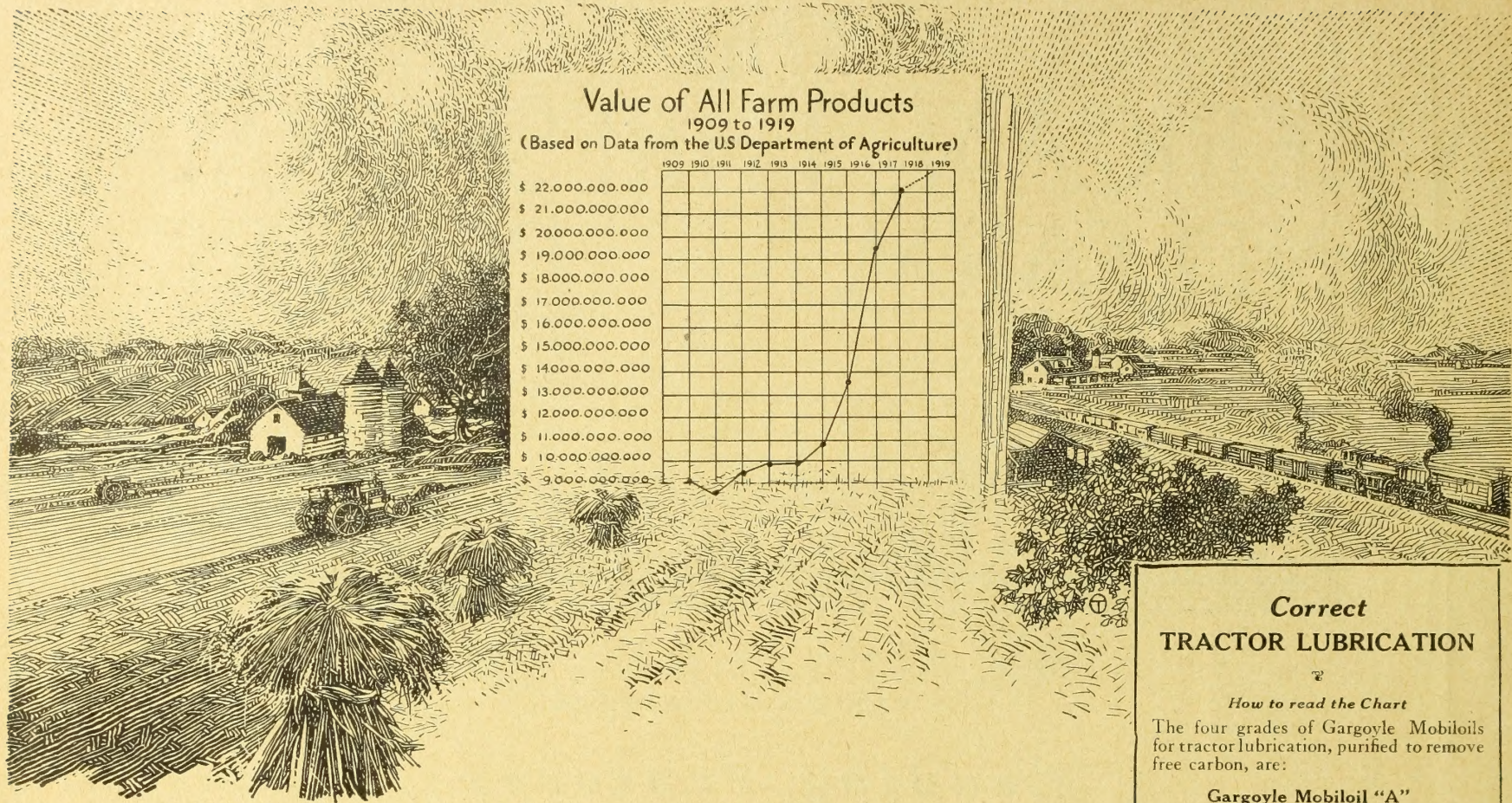
surely want him back a good reputation for rough several years of neighborhood is the best advertisement of his business he could wish for.

One of the most essential things to a successful threshing business is a thorough and complete understanding of every detail pertaining to the operation and management of both ends of the outfit. If the owner knows the machine and its proper operation thoroughly he can avoid any

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count. Too many threshermen do not go ahead from their years of worthy service to mankind to repay them amply when they must retire. To buy a threshing outfit, pay for it, and realize only a living from its earnings until it is worn out is not a successful business proposition as such.

Naturally, then, the man who would make a success of the threshing business must take into



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Allis-Chalmers (General Purpose)	BB	A	BB	A	BB	A	BB	A	A	A
All Work	BB	A	BB	A	BB	A	BB	A	A	A
Appleton	BB	A	BB	A	BB	A	BB	A	A	A
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Coleman	BB	A	BB	A	BB	A	BB	A	A	A
Common Sense	BB	A	BB	A	BB	A	BB	A	A	A
C O D	BB	A	BB	A	BB	A	BB	A	Arc	Arc
Craig	BB	A	BB	A	BB	A	BB	A	A	A
Creeping Grip	BB	A	BB	A	BB	A	BB	A	B	A
Emerson Brantingham (EB) 9-18 (EB)	BB	A	BB	A	BB	A	BB	A	Arc	Arc
" (Big Four) (Reeves)	BB	A	BB	A	BB	A	BB	A	Arc	Arc
Flour City (Heavy Duty)	BB	A	BB	A	BB	A	BB	A	A	A
Fordson	BB	A	BB	A	BB	A	BB	A	A	A
Gas Pull (Rumely Co.)	BB	A	BB	A	BB	A	BB	A	A	A
Grain Belt	BB	A	BB	A	BB	A	BB	A	A	A
Happy Farmer (Model B)	BB	A	BB	A	BB	A	BB	A	A	A
Hart Parr	BB	A	BB	A	BB	A	BB	A	A	A
Heider	BB	A	BB	A	BB	A	BB	A	A	A
Hession	BB	A	BB	A	BB	A	BB	A	A	A
Hollis	BB	A	BB	A	BB	A	BB	A	A	A
Holt Caterpillar (Model 45) (Model 18)	BB	A	BB	A	BB	A	BB	A	A	A
Ilmois	BB	A	BB	A	BB	A	BB	A	A	A
Indiana	BB	A	BB	A	BB	A	BB	A	A	A
K C Prairie Dog	BB	A	BB	A	BB	A	BB	A	A	A
Kinnard	BB	A	BB	A	BB	A	BB	A	A	A
La Crosse	BB	A	BB	A	BB	A	BB	A	A	A
Lauson	BB	A	BB	A	BB	A	BB	A	A	A
Liberty	BB	A	BB	A	BB	A	BB	A	A	A
Lightfoot	BB	A	BB	A	BB	A	BB	A	A	A
Minneapolis	BB	A	BB	A	BB	A	BB	A	A	A
Mogul (I. H. Co.)	BB	A	BB	A	BB	A	BB	A	A	A
Mogul (I. H. Co.)	BB	A	BB	A	BB	A	BB	A	A	A
Moline Universal	BB	A	BB	A	BB	A	BB	A	A	A
National	BB	A	BB	A	BB	A	BB	A	A	A
Nevelup	BB	A	BB	A	BB	A	BB	A	A	A

Royce	BB	A	BB	A	BB	A	BB	A	A	A
Rumely (8-16)	BB	A	BB	A	BB	A	BB	A	A	A
Rustall (Giant)	BB	A	BB	A	BB	A	BB	A	Arc	Arc
Sandusky	BB	A	BB	A	BB	A	BB	A	A	A
Titan (I. H. Co.)	BB	A	BB	A	BB	A	BB	A	A	A
Townsend	BB	A	BB	A	BB	A	BB	A	A	A
Turner	BB	A	BB	A	BB	A	BB	A	A	A
Trundlar	BB	A	BB	A	BB	A	BB	A	A	A
Twin City (Model 15)	BB	A	BB	A	BB	A	BB	A	A	A
" (Model 16)	BB	A	BB	A	BB	A	BB	A	A	A
" (Model 12-30)	BB	A	BB	A	BB	A	BB	A	A	A
Velic	BB	A	BB	A	BB	A	BB	A	Arc	Arc
Walls Cub (Junior)	BB	A	BB	A	BB	A	BB	A	A	A
Waterloo Boy	BB	A	BB	A	BB	A	BB	A	A	A
Whitney	BB	A	BB	A	BB	A	BB	A	A	A
Wisconsin	BB	A	BB	A	BB	A	BB	A	A	A

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, MAY, 1920.

No. 1.

Custom Threshing as a Business

CUSTOM threshing is a business different from that of plowing, sowing and reaping.

It is a line of work requiring a different sort of skill from that of producing a crop from the soil. The equipment necessary for doing a large amount of threshing, as the successful thresherman must do, is far too expensive for the farmer to own for his individual use. Since the advent of improved farming methods, grain production has become so extensive that the task of threshing it years ago grew into a distinct business with a good many men devoting most of their time to that specialty of farm work. Threshing has thus come to be a business with many thousands of dollars invested in threshing equipment. All this machinery has been purchased from the manufacturers and placed in the grain producing sections of the country as a business enterprise.

When a man purchases an outfit and starts out to do custom threshing in a community of farmers, he is immediately confronted with the question of winning or losing in a business sense, that is, making his business a profitable one. To say the least there is little or no pleasure in following a rig year after year. Profit over all items of expense is therefore the goal to be reached. In a good many cases the thresherman has a hard pull to get

his work done each year and at the end of the season be able to figure a nice profit clear of all expense from labor, repairs, interest on the investment, depreciation, taxes, etc. He has a good many odds to fight against in the way of poor crops and wet seasons. Unless he keeps a very close tab on every detail of the business he may be deluded into thinking he is making good when his prosperity may be only apparent.

Too many threshermen fail to take into serious consideration every element of their business and practice that weighs for or against their bank account. Too many threshermen do not get enough ahead from their years of worthy service to mankind to repay them amply when they must retire. To buy a threshing outfit, pay for it, and realize only a living from its earnings until it is worn out is not a successful business proposition as such.

Naturally, then, the man who would make a success of the threshing business must take into

full account all the factors that enter into his business. He must see them clearly and comprehensively. In threshing, as in every other business, there are certain fundamental principles that cannot be disregarded.

- In the first place he must have a thorough and complete understanding of the business in detail. Next to that he must have a good outfit of machinery, that is, one that is in a good state of repair, but not necessarily a new rig. It must be ready for business when it goes to the field for the first job, and be kept in that condition just as

unnecessary wasting of grain and prevent the mechanical injury to any part through neglect. This not only safeguards the machine and the farmer's grain but it helps as nothing else can in the matter of maintaining a good reputation in his community. It is not only a profitable practice but is rightfully a part of his job and is what he is paid for, as well as putting the grain into the wagon.

The constant aim of the successful thresherman is to establish a feeling of good will toward himself and a firm confidence in his word and integrity.

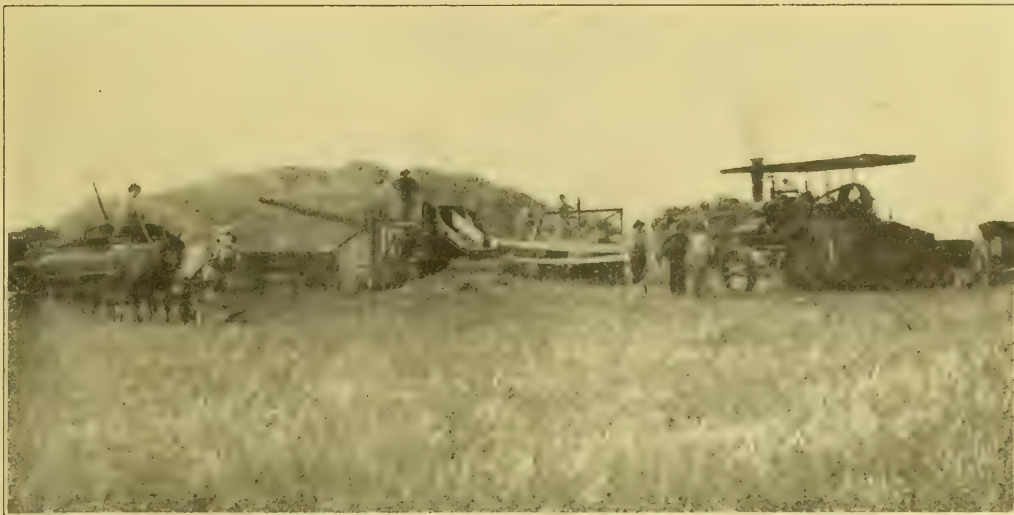
This is a business asset that he cannot afford to miss. He must be reliable in that when he promises to do something or be at a place at a stated time, he can be relied upon to do it without fail, unless some unforeseen circumstances make it impossible. Misunderstandings will arise at times, and cannot be avoided, but farmers soon learn to know whom they can depend on for good grain measure and a square deal in general.

Threshing as a business has a good many ups and downs and when a man buys an outfit he must stake his capital on the final outcome of conditions, many of which, such as crop failures, and wet seasons, are entirely beyond his control. These and many other factors directly

concern his business in a vital manner and when all taken together requires a very careful attention if he does justice to his own interests. Also labor, repairs, depreciation, interest on the investment, and miscellaneous expense items, are constantly eating into his receipts and unless he gets a fair, reasonable price for his work he will surely face a substantial loss of profit. But this can usually be avoided if careful attention is given to the matters of securing a good line of jobs, repairing of the outfit, and getting a price that is sufficient to enable him to make a nice profit. These three things are of the utmost importance and must not be neglected in any detail, for they are fundamental and outstanding factors that make for success.

The securing of a good season's work in a grain growing community is a simple matter for the wideawake thresherman with a good machine.

(Continued on page 70.)



I am sending you fourteen new subscribers to The American Thresherman and Farm Power. I am also sending you a picture of my outfit. I have threshed for fifteen years, run this engine every year, had three different separators and I like this one best of all.

Wheatland, Wyoming.

ERNEST GREENLEE.

(Bless your faithful soul. It's this kind of assistance that would soon double the circulation, and enable us to spread the gospel to the "Uttermost ends of the Nation." If all our readers could only realize what a help just one new subscriber means from each old one, Sile's hardest labors would soon be over. Give us one hundred thousand subscribers and we'll give you returns a hundred fold greater than ever before.—Old Sile.)

nearly as possible throughout the season's work. Without an outfit of quality, that does quality work, he cannot gain the best jobs in his territory nor hold that work for a consecutive number of years. The machine must do a good grade of work, save a high percentage of the grain and clean the grain that goes into the wagon. If the outfit is in good shape this will not be difficult at all under ordinarily good conditions and it will mean that the farmers will surely want him back again another season. A good reputation for quality work built up through several years of square dealing in one neighborhood is the best advertisement of his business he could wish for.

One of the most essential things to a successful threshing business is a thorough and complete understanding of every detail pertaining to the operation and management of both ends of the outfit. If the owner knows the machine and its proper operation thoroughly he can avoid any

A Little Hole Misleads Them

(Editor's Foreword: This is a fiction story of a tractor; but it is based on an experience of a real tractor man who dictated the facts to a friend.)

THE Old Man was raving. Sitting in the president's chair at his big manufacturing plant, he felt helpless to lend aid in a matter that affected the honor of his machinery.

We must go back a bit: back of the telegram lying on his desk to events that had happened two days before. The shift in time brings a shift in scene. Instead of starting in the Middle West, this story started in New England.

Charlie Blake, a country dealer of Blank's farm power machinery, had entered a tractor contest. A small county fair was being held near Springfield, Massachusetts; on the final day of the fair, in lieu of automobile races, this contest would be held. Charlie was not well posted on tractor contests; indeed, he could have known more about tractors themselves. But he was a zealous partisan: no odds were too great for him. He was willing to promise anything about his line of goods, and—to do him justice—he expected the Blank line of machinery to fulfill every promise. Acting as direct agent for a big Boston jobbing house, he intended to sweep the boards with the two sizes of Blank tractors that he handled.

The night before the big day found Charlie and his tractors at the county seat. After supper, he stepped across the fairgrounds to the Blank tent

to have a look at his two entries. The helper who had been demonstrating the tractors had said that the larger machine was acting badly. Charlie had so much confidence in his firm's tractors that he could hardly believe they would stop when out of gasoline, so he wasn't much worried.

He gave the old crank a good turn and got the motor started. Cripes! What an awful sputtering! This new tractor, a 9-21-horse power, was billed to pull three fourteen-inch plows back and forth across the lot next day. She didn't sound as if she'd do much more than get herself across. After backing and starting a bit, Charlie lost his good-natured look. He clamped on his hat and headed for the telephone office.

"Give me my firm (naming the big jobbers) at Boston," shouted Charlie, now thoroughly alarmed. His excitement communicated itself to the girl at the switch. She got the connections in record time. Charlie was soon telling his troubles to the night watchman, who promised to get the best service man of the house started at once for the scene of action.

Charlie breathed easier. He wasn't the man to find trouble in an engine (especially *his* engine), so he rolled in for the night.

Noon next day saw a worried looking trio bending over a 9-21 tractor of well-known make. Around them was gathered a typical collection of New England ruralists, doing (don't they always

do it!) their best to madden the harried champions with futile suggestions.

The fatal hour had arrived. Charlie was still bursting with pride over the feats of his smaller tractor, which had done all he had promised for it. But his hour of triumph was past. The 9-21, after a terrible fit of coughing, refused to budge with *two* fourteen-inch plows tied to her tail. Poor Charlie had to stand for a lot of chaffing from competing dealers and guffawing spectators.

The Boston service man was a fairly good workman. He had to admit that this case had him baffled, but he wasn't going to stop there. As soon as he got back to his office in Boston, he told the sales manager of the plight he was in. You can bet there were some harsh words. Charlie wasn't the only man affected. This defeat affected the jobbers and the big Old Man whose name had long been a word to demand attention in the tractor world. A telegram of some length started westward from Boston right then and there.

So here we are back in the office of the Old Man. You can see now why he was raving. The fair was over; the people and his firm's competitors were gone, and they were telling a wide section of New England countryside that the Old Man's tractors, from 9-21 size on up (you know how things grow larger in the telling), were not in a class with their rivals.

(Continued on page 70.)



Charlie Would "Tell the World" His Tractor Could Outpull All Others.

The Eastern Farmer Goes Out to Plow

THE Indian farmer sowed his seed as his fathers did before him in the good old "hood casting" way and never knew that it was ever done differently until the West came to his door in the form of a Baptist missionary. This missionary told tales of the way corn was sown and threshed back in the swamps of the Wabash river and opened a whole new vista for the native farmer of the Punjab. Because he had been born on a farm back in Indiana, this missionary was interested in anything which pertained to farm life and he liked to see the appreciation in the eyes of the Indian at the stories of Middle Western farming. The surprising fact that each of them discovered was the similarity in methods. Indian methods are instinctively correct; it is in the implements

The farmer of the Middle West who plows his corn lands uses an implement which is very similar in design to the affair that the Indian uses on his fields. The native implement is made of wood, but it is

and shaped like a Dutch hoe has been found most satisfactory. Seed is usually plowed in, although seed drills and drill hoes are known. The native farmer either uses the "kodal" or spade with the blade set at an

with oxen or beating out by hand.

Figures for the years 1915-1916 show that 78,679,425 acres of rice were under cultivation, 23,871,366 acres of wheat, 8,012,987 acres of barley and 93,171,259 for other food

products. If the Indian farmer is to feed even his own people and keep up the supply of grain exported to foreign markets, it is necessary that he use the implements which shall accomplish the most effective results. If the agriculturist is encouraged to stock up on cattle, sheep, or goats to supply the leather industries of India, the cultivation area of grains will undoubtedly be increased and the farmers encouraged to stay on their holdings. At present, due to industrial unrest, the farmers are moving into the villages where they become



Field Laborers Prepare the Paddy Rice for Threshing. When the Pile Is Ready, the Oxen Will Tread Out the Grain, and in the Process Waste a Substantial Proportion.

of this industry that the West can offer improvements. Representatives of the Interchurch World Movement who are making a world survey of industrial conditions emphasize the need of modern agricultural implements for this occupation in India.

usually tipped with iron. The harrow and the roller are replaced by the levelling beam and, in northern India, the levelling beam and the plow are the only implements used.

For cultivating the heavier soils an instrument with a single blade

angle toward the worker or the "kharpi" or small hand hoe. There is very little harvesting machinery in India and American-made implements would prove of inestimable value to the farmers. The grain is either separated by treading out

domestic servants and there is a resultant dearth of farm labor. Farm implements, especially threshing tools which will eliminate a great number of field laborers, will be a boon to the Eastern farmers, and help them produce more food.

Farmers Lead as Truck Users

FREQUENT requests have been made to The American Thresherman and Farm Power for information in regard to the number of trucks in use in the United States at present. These requests have usually come from farm users or owners of trucks.

In an effort to learn more of this subject, interviews have been sought with truck manufacturers, and some figures have been gathered in an effort to forecast the tendency toward farm use of the truck. At least three large truck manufacturers, gave information that was very similar. From their remarks, we offer the following statements.

Since 1917, it has been assumed that ten per cent of the trucks in use in the United States have been used entirely for farm work. In spite of the fact that the total number of trucks has increased greatly since 1917, the percentage in farm use has neither increased nor diminished. The farm purchasers seem to have taken their percentage of the output with remarkable constancy.

At the present time about one million trucks are in operation. This means that about one hundred thousand trucks are in farm use. Despite the fact that for three years the farmers have demanded trucks on the ten per cent of production basis, the manufacturers mentioned expect 1925 to see one million trucks in use on the farms. As no optimist can expect to see ten million trucks manufactured before 1925, it means that the proportion in favor of the farmers will swing rapidly to a higher percentage than heretofore.

The distribution of trucks heretofore has followed closely the distribution of population. New York, with the greatest number of inhabitants, has purchased the greatest number of trucks. Illinois, Pennsylvania, and Ohio, the next largest states, have the largest numbers of trucks. This similarity is not expected to continue. Already a forecast of what is to be may be found in the fact that Iowa, by no means sixth in population, is sixth in the number of trucks owned. Manufacturers

expect the truck field to be best in the great farming states. Kansas is already twelfth. She may be expected ere long, to claim a higher place in truck statistics, due to the great amount of ton-per-mile haulage necessary to get her grain crops to market.

Another fact, already established will become more pronounced, the big men of the truck world say. The pleasure car has grown from infancy to almost the greatest factor in our modern life. The gain in numbers of pleasure cars in 1919 over 1918 is twenty-one per cent, while the gain in trucks was thirty-seven per cent. Trucks are due to increase in proportion much faster than pleasure cars.

Good roads will mean more trucks, and more trucks in turn will mean more good roads. Bad railroad service has helped both trucks and highways. At present, so we have been told, eighty per cent of the tires made in Akron and shipped to Cleveland for distribution to the United States and foreign countries are transported by motor trucks.

The Chicago Tribune of March 28, 1920, published the following figures:

"Compilations recently made for C. H. Smith, district manager of the B. F. Goodrich Rubber Company, from reports of secretaries of state and estimates of its own statisticians show there were 953,093 trucks in use at the end of the year 1919, as compared with approximately 700,000 for the preceding year. This is a gain of thirty-seven per cent, sixteen per cent greater than the increase by passenger cars; but eighteen states keep separate compilations of truck registration.

"Figures by states and the rank of each state in truck ownership follow:

State.	Rank	Trucks.
Alabama.....	25	10,249
Arizona.....	41	3,200
Arkansas.....	37	5,600
California.....	5	58,700
Colorado.....	20	13,500
Connecticut.....	18	19,799
Delaware.....	45	2,100
Florida.....	30	3,239
Georgia.....	28	9,300
Idaho.....	38	5,600
Illinois.....	2	65,000
Indiana.....	10	36,000
Iowa.....	6	42,500
Kansas.....	12	27,800
Kentucky.....	30	9,105
Louisiana.....	32	7,100
Maine.....	36	5,792
Maryland.....	26	10,160
Massachusetts.....	8	42,000
Michigan.....	9	36,836
Minnesota.....	11	34,300
Mississippi.....	35	6,350
Missouri.....	14	25,000
Montana.....	47	1,200

(Continued on page 69.)

Harvesting on the Equator



No. 1. Reporting for Work.

PERHAPS you thought the weather was hot during last summer's harvest. If so, just take a glance at these pictures and console yourself with the fact that some people were having worse weather.

These pictures were taken by Wm. H. Bailey of the J. I. Case Threshing Machine Company, who is now traveling throughout South America. In addition to selling United States machinery to foreign dealers, he has found time to mail these pictures to his old friend, Uncle Silas.

These are views of people and places in Ecuador. This old country lies under (or over) the equator. While much smaller than its neighbors, Colombia on the north and Peru on the south, it is almost as large as the great states of Kansas and Colorado combined, and it has plains more dry and arid than anything in Kansas, and mountains more beautiful and



No. 2. Nothing Swift About This.



No. 3. The Beards Tickle Mother. Yes, Wheat-beards!

Number Four shows Sister Susie headed for the threshing machine with a load of grain. Number Five shows the separator boss and his assistants. The loads are not coming fast enough to keep them busy. These two men actually do the threshing on the estate of ex-President Plaza.

Number Six is last but not least. You recall the "water-boy" of the threshing crews. This is the "water-girl." Her precious fluid is not for mechanical, but for human consumption.

All in all, don't you prefer our way? It's lots of work for the farmer's wife to have to feed the threshers, but in a day or so the job is done. In Ecuador threshing lasts for weeks.



No. 4. Sister Susie Needs Socks.



No. 5. The Separator Boss Needs a Load.

lofty than any of Colorado's gems. As you glance over these views, picture to yourself what would be our condition were it not for the modern methods and machinery available in the good old United States. Ecuador, with nine-tenths of her population a rural people, has none of the great conveniences to offer that we, with a population almost evenly divided between city and country dwellers, can give to all citizens.

Notice the young man with abbreviated trousers. He has his worldly possessions under his arm; in another hour he will be in the harvest fields. Recall how much grain Bill, the hired hand, can cut in a day with the binder. Twenty of the Ecuador harvest-hands could not accomplish in a day what Bill does in one good hour's work. Speaking of plowing, Bill, with the small tractor and two fourteen-inch plows, will have all the edge on twenty men handling these old Ecuador plows shown in Number Two.

The ladies help harvest, too. Number three shows Mother helping the boys gather in the grain. Every little bundle helps.



No. 6. Who Wants a Drink?

TEXACO GAS ENGINE OIL



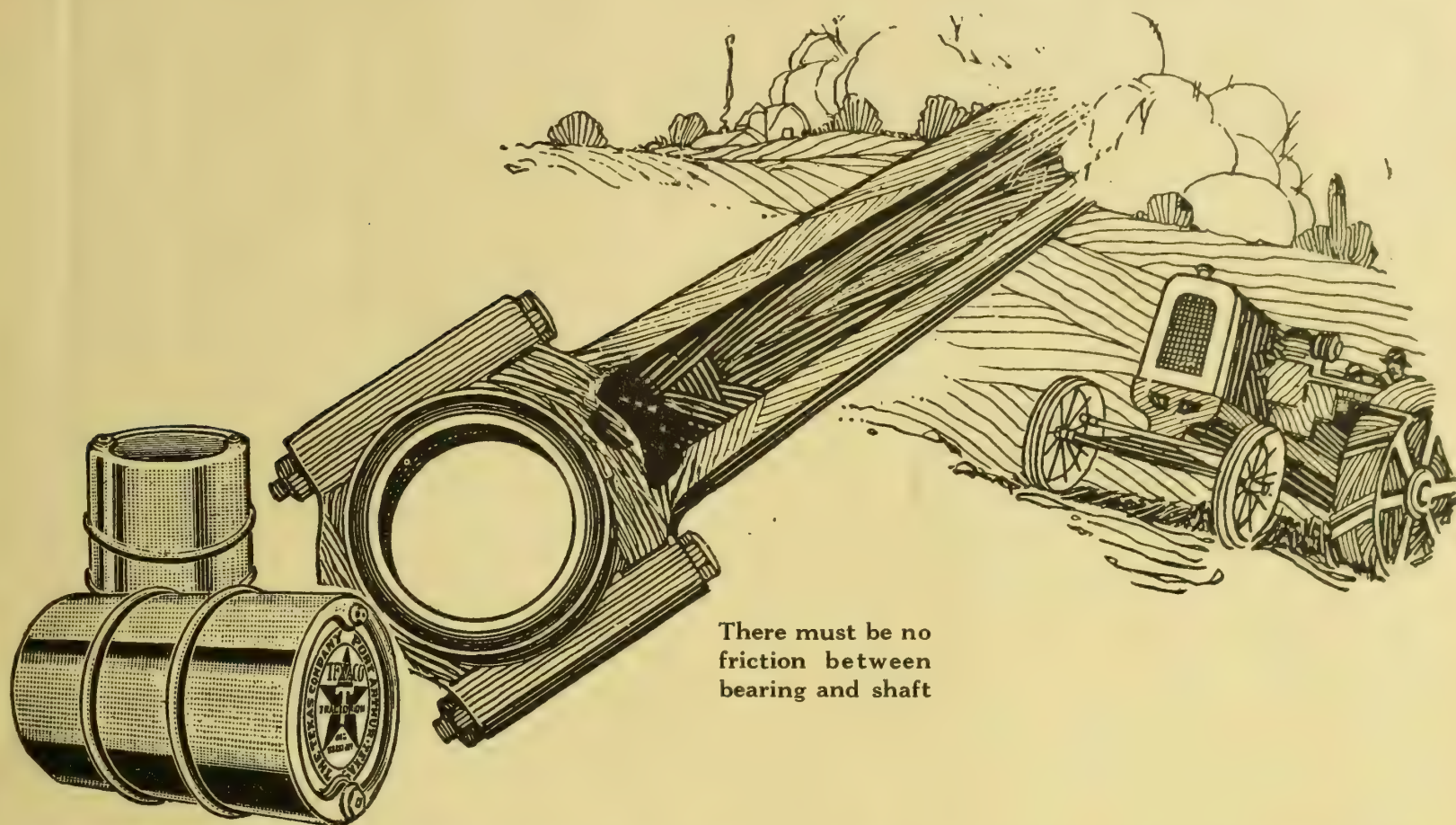
THUBAN COMPOUND



HARVESTER OIL



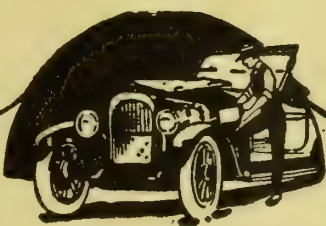
AXLE GREASE



There must be no
friction between
bearing and shaft

TEXACO

TRACTOR OIL



Texaco Motor Oil

The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.

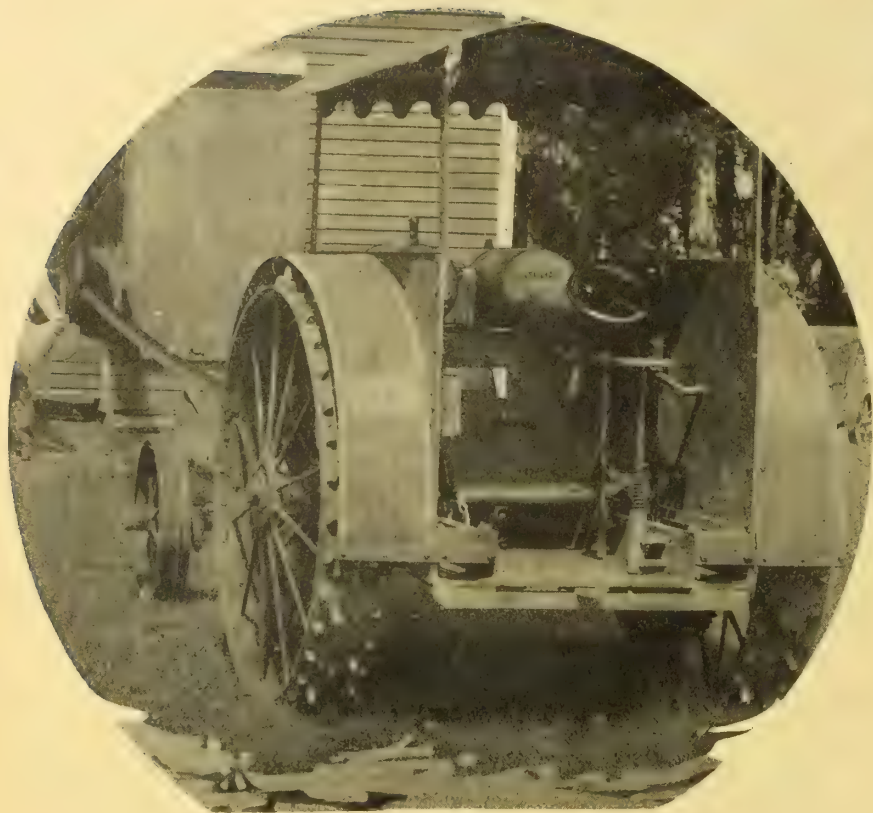


Every badly-worn bearing is a mute but powerful protest against improper lubrication. It is evidence that the tractor has overheated, that the motor has knocked, that fuel has been wasted, that power has been lost; in short, that the tractor has not "kept going" in the field. And if the tractor is to pay the farmer, it must not lose time when he needs it most. For continuous and dependable operation there must be no friction between bearing and shaft. TEXACO TRACTOR OIL will take this wear. Its tough oil film is exceedingly durable—quality makes it so. Its wonderful body makes it economically lasting. TEXACO TRACTOR OIL comes in 33 and 55 gallon well-built steel drums, wooden barrels and half-barrels, and five gallon cans.

THE TEXAS COMPANY

Petroleum and Its Products

CHICAGO NEW YORK HOUSTON
OFFICES IN PRINCIPAL CITIES



It's a wise farmer who uses Hettrick Belts

HETTRICKS have been in service ever since the old timers wore short breeches—and when it comes to good work, they certainly are “there.”

Many who began using Hettricks years ago are still using them, which is the best proof that they're satisfied.

Hettricks are good canvas belts, capable of giving the operator his money's worth—and they do. They're strong—pliable—sure-grip—built to meet varying conditions.

Put your trust in the Hettrick to take care of *your* belt operations. Your good judgment will be vindicated time and again in the extra service they give.

Hettrick Manufacturing Co.
Toledo, Ohio

Hettrick

Canvas Belts

Mention The American Thresherman and Farm Power

Successful N. I. V. A. Meeting

ON April 22, the Tractor and Thresher Department of the National Implement and Vehicle Association met in the Auditorium Hotel, Chicago. While the attendance was not large, there was a representative showing from all the large tractor manufacturers and the discussions of trade conditions brought forth expressions from many individuals present. It was agreed that the feature of the meeting was the address of W. H. Stackhouse of the French and Hacht Company. He had assigned to him a subject of tremendous scope: “The effects of future business conditions on the implement industry.” It was worth a long trip to Chicago to hear Mr. Stackhouse present conditions as they are, and it is our hope to secure the proof-read copy of his speech from the Association, in order to give our readers a chance to hear his message.

G. N. Peek, of the Moline Plow Company, read an article showing the advancement that has taken place in the threshermen's and farmers' financial condition. As he pointed out, methods of financing sales of farm implements are antiquated, and result in the farmer paying toll to the metropolitan banks, whereas his commercial paper

could easily be handled entirely by his country bank at a saving to country banker and to farmer.

Many men as well known to the rank and file of threshermen as to the trade itself, were in Chicago. E. J. Gittens of the J. I. Case Threshing Machine Company proved himself a pleasing presiding officer, and Finley P. Mount of the Advance-Rumely Company gave some fine advice about securing production statistics. Many persons missed J. B. Bartholomew of the Avery Company, but his company was well represented by Mr. Bowen. Harry Bates of Steel Mule fame gave some new ideas on the oft-debated subject of tractor rating, while Mr. Chase, father of the Nebraska Test Law, helped to make clear that seeming innovation in the tractor world.

It was a good meeting and the men present were good men to know. While listening to the earnest address of Mr. Stackhouse, we wished that any person, who holds to the idea that manufacturers are not interested in the men that toil hard to produce and use their machines, could have a front seat. Such a person would have found cause to change his ideas.

Something New

ON looking over an advertisement which appeared on page 74 of the April issue of The American Thresherman and Farm Power, you may notice the astounding announcement that the Banting Manufacturing Company of Toledo is furnishing a four-point friction clutch in the Greyhound thresher.

This little word “thresher” was intended for “engine.” Once the damage was done and the word “thresher” inserted, the perspiring copy writer faithfully noted the

various sizes of Greyhound threshers, continuing the illusion to the end.

If you ever tried to write copy about 2 A. M. on the morning after the last night for mailing copy, you can imagine how this might happen. If you have ever been an ad. copy-reader trying to arrange that last page, you will know why this novel announcement went sailing in.

Get a fresh start and read a Banting advertisement written in the clear light of day, as shown on page 18 of this issue.

New E-B Branch House

ANOTHER step to give efficient service for the farm machinery users of New York and New England comes with the announcement by the Emerson-Brantingham Implement Company of the opening of their new independent Branch House at Auburn, New York. Besides New York, the six New England States are served by this branch house. Several transfer points have already been arranged so that a complete and satisfactory service can be maintained. Formerly the E-B business in all these states came under the jurisdiction of their Harris-

burg, Pennsylvania, branch, with a sub-branch at Syracuse. This sub-branch will now be discontinued.

Frank S. Jacques, long with the Osborne and International Harvester Company, will manage the Auburn Branch and has already assumed his duties there.

Tom—“You don't really imagine that girls actually propose sometimes, do you?”

Dick—“Well, all I know is that this is Leap Year and some girls are getting married who never got married before.”—*Boston Transcript.*

EISEMANN

MAGNETO



IN THE MORNING, bright and early—driving your tractor to the field to start the day's work where you left off, there's no time to tinker with your ignition—there's big work to be done—the *spark* must be there.

The EISEMANN Magneto with the Automatic Impulse Starter starts the engine instantly, producing a powerful spark at a quarter turn of the crank. You're off—happy that the day's work is progressing.

Such is EISEMANN Ignition satisfaction. It lasts from sun-up to sun-down and every day in the calendar. The EISEMANN Magneto is dust-proof, water-proof and heat-proof and stands up under constant jar and vibration. Even at the slowest usable tractor speed, the non-varying, unfailing spark explodes all the gas, even lean mixtures or low-grade fuels, helping your engine to deliver *all* of its power.

Insist on having an EISEMANN Magneto on your tractor and you will forget about ignition troubles.

Plant and General Offices:
No. 32 33d Street, Brooklyn, N. Y.

THE
EISEMANN
MAGNETO CORPORATION

CHICAGO—1469 So. Michigan Ave.
DETROIT—85 Willis Ave. West
LONDON, ENG.—Stanley J. Watson,
37. Sheen Road, Richmond

Our Service Stations Are Conveniently Located Almost Everywhere

The American Thresherman and Farm Power

B. B. CLARKE, Editor

V. V. DETWILER, Managing Editor
MARK G. TROXELL, Associate Editor
FRANK M. CLARKE, Associate Editor

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Chicago.....R. J. Blake, 914 Kimball Bldg.
Detroit.....C. L. Allen, 513 Chamber of Com. Bldg.

SUBSCRIPTION RATES

One Year.....\$1.00	Three Years.....\$2.00
Two Years.....\$1.50	Five Years.....\$3.00

Canadian and foreign postage,
50c a year extra.

We guarantee every subscriber against loss through dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned The American Thresherman and Farm Power when writing the advertiser.

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A PAGE WITH THE EDITOR

BEGINNING with this, our twenty-third anniversary issue, we have added two more cells to the editorial battery. Mr. Mark G. Troxell, a writer of note with a nation wide experience in the practical field, a veritable cyclone of energy from the Sunflower state, where Ed Blair received his inspirations for writing "Kansas Zephyrs," and from whence we received our present managing editor, has come to join our ranks. Mr. Troxell is one of those straight-from-the-shoulder boys, who doesn't dodge around calling spades shovels.

The other "inspirator" is Frank M. Clarke, one of the writers in the early days of this publication under the nom de plume of "Pat Moran" and "Sever O. Peterson." "Old Man Frank" is a fisherman and has always argued that a real live fish should be allowed to run the length of the line before being "reeled in." He now comes to us under the nom de plume of "Buck McKinney," and his first offering of "Listen to Me" will be found in this issue.

THIS nation, and the whole world for that matter, is upon the verge of a social earthquake, which is menacing the very foundation of society. The laws of God and man have been set at naught until men have no confidence in each other, and it seems that the hand of every man is raised against the hand of every other man.

There is nothing but an acknowledgment of the Fatherhood of God and the Brotherhood of Man, preached and practiced on every hand, that will bring us back to God. Upon the shoulders of every priest and preacher, of whatever faith or creed, rests a mighty responsibility. They must start at once and carry on a continuous revival of righteousness, preaching the One True God, and encouraging people to help bring the world back to its senses once more.

During the recent uncalled for and unholy war, brought upon us by the acts of an unscrupulous ruler with a cracked brain, we taught our boys to slay and kill; to set aside for the time being Christianity, justice, mercy and pity and to set up instead, murder, rapine and lust in every form, and to pile up the dead into windrows like raking the hay from the

field and stacking it up at harvest time. We fought, we slayed and we robbed each other the while, with unscrupulous profiteering and infamous rascality.

It requires time and education and the practicing of the Christian religion and its virtues to overcome this hydra-headed monster of wrong that pervades everywhere. Surely Satan and his host have been turned loose upon the world. To your tents, oh Israel, with your priests and preachers and help avert this terrible danger by teaching and preaching and practicing justice, honesty, kindness and mercy. May Almighty God help to arouse the nation to the condition that confronts it and help every American citizen to do his whole duty.

ALL records of settlers in northern Wisconsin were broken during the month of March. The Chicago & Northwestern alone delivered two hundred cars of household goods and other roads in proportion. These were all experienced farmers from various states in the corn belt, who sold their improved farms and bought unimproved lands. The lands in northern Wisconsin are advancing rapidly, almost doubling in price during the last year or two.

THE great shortage in paper has forced us to cut every department to the limit, until such time as we are assured of receiving paper with which to print this magazine. It is not a question of cost, but one of supply and demand. It has never been our thought to reduce the various departments which are considered of so much interest to all, but the paper mills have served notice on us that this action must be taken at once or more strenuous measures might be the result.

Beginning with the June issue the special articles, "Uncle Silas," "Aunt Malinda," and "Parson Dickson" will also of necessity be reduced to half pages instead of full pages. Kindly bear with us until things right themselves, when we will resume our regular size in every way. When a daily paper like the Chicago Tribune is forced to cut its size one half, and importunes its readers to stop buying papers and borrow them instead, you can realize the seriousness of the proposition.

WITH the shortage of help, the shortage of crops, the shortage of paper, and the shortage of energy, together with an overwhelming longing for laziness, we'll soon be out of the race.

THE nation is facing a dangerous condition right now. The farmers need help and without help crops cannot be produced. When young men sneer at and refuse one hundred and twenty-five dollars a month as farm hands, with this infamous eight hours for a day's work demand, it's time to pause in our headlong career and ask ourselves where the food is to come from to feed these non-producing profligates of the cities, who consider that only the "mud-sills" of the farm should toil for their daily bread.

These are not the times for putting theorists and dreamers in power, but real brainy, thinking business men, who know by hard knocks what it means to earn their daily bread, and who are willing that all others shall have an equal chance with themselves. This country has been run dangerously near to destruction now by theoretical ideas that will not bear the sunlight of actual test, and the sooner we wake up to these conditions and prepare for the supreme test of human misery which will soon be ours unless we change our tactics, the better off we will be.

The farmer cannot hope to raise crops and perform all the requirements of the farm in any eight hours a day, and it's chattering ignorance to talk about such a thing. Is not the farmer just as good as the carpenter, the plumber or any other tradesmen who refuse to perform over eight hours' work in one day? What has made these preferred classes of tradesmen think that they should not toil just as long as the farmer does for the same pay? Are not the farms being bled white of their young men because of the unjust discriminations against them, and when the price of work double that what the farmer can pay is dangled before them in shop and factory? These are times for thinking men, for fairness towards all men, and a mighty poor time for unjust discrimination. Without bread we will starve; the farmer cannot maintain an aristocracy of idleness and laziness very much longer at his expense.

Sixty Years of Threshing

This is an interview with one of the oldest threshermen in the country. His story brings us back to days long forgotten and tells of his experience with thresher outfits in a way that will be of the greatest interest to present day threshermen.

By J. D. Craig



Wes' Mills

WES' MILLS is a thresherman of sixty-three years' standing—and you would naturally figure that a man that has been working an outfit for sixty-three years could tell you something about threshing.

He can.

"Yes, I remember," he says, "back in '56 Meinrad Rumely went to the Illinois State Fair at Chicago to enter a threshing contest. Chicago in those days was in some ways different from what it is today. Its transportation system was about as adequate as some people say it is now—it consisted of about eighteen omnibuses. The population was a little

over 80,000 and business was transacted around the public square on which they had just built a new court house, three stories high, that was the boast of all the counties in that part of the State.

"At that time, threshing contests were quite the thing at State fairs. Meinrad Rumely went down to this one at Chicago, but when he arrived he found

no grain had been apportioned for his use. Maybe the fact that the Rumely thresher had been winning all these county fair contests previous to this had something to do with his failure to get grain. At any rate my father happened to be at this Chicago fair and learned of the situation. He telegraphed me here at Union Mills to ship some grain, and as we happened to have some fine wheat ready for threshing I arranged with the station agent at La Porte

to ship this on a flat car covered with canvas to Chicago, the grain arriving there the next day in time for the contest.

"Of course, the Rumely won, and likewise the wheat, being especially fine, was sold for seeding at \$2 a bushel, the standard price at that time being 40 cents."

That was the year in which James Buchanan was elected President. In all the years since that, Wes' Mills' outfit has had first call from the farmers around Union Mills, Indiana. His famous separator, which he affectionately calls "Old Long John" because it was made three feet longer than the ordinary separator, was a familiar sight to father and son in all the neighborhood around.

Wes' Mills was born in 1843 and started working in a threshing outfit when he was twelve years old. The first separator he bought was not a Rumely. As a matter of fact, during the first three years of his experience as a thresherman he did not use Rumely separators. "I sold two or three different makes," he tells, "after having them a short time, because they would not separate the grain. They wasted too much. They were not designed correctly."

"A little over fifty years ago I bought my first Rumely, then known as the New Rumely, and I have owned and operated a Rumely separator ever since. For over fifty years I have owned a complete Rumely outfit, including both a thresher and engine, and I have never had cause to change from the Rumely machine through more than half a century of threshing work."

"I never saw the time when 'Old Long John' refused to stand up to the job," he continued, "I remember one time about forty years ago one of my nephews, then thirteen years old, and myself went out on a job together. He would handle the engine and I would handle the separator. This particular summer the boy and I alone in eleven and a half days threshed 14,560 bushels of wheat with our Rumely outfit. And one fall I threshed 1,400 bushels of clover seed

absolutely alone. Probably no boy was ever prouder of his favorite wagon or gun than I was of my Rumely outfit. The Rumely threshers are the best grain savers I have ever seen and I have studied them all for many years. The Ideal has a greater capacity than other machines. There is no possibility of its becoming clogged. The straw moves through the Ideal in an even flow. It is very easy to get at every part and it delivers every kernel to the grain pans.

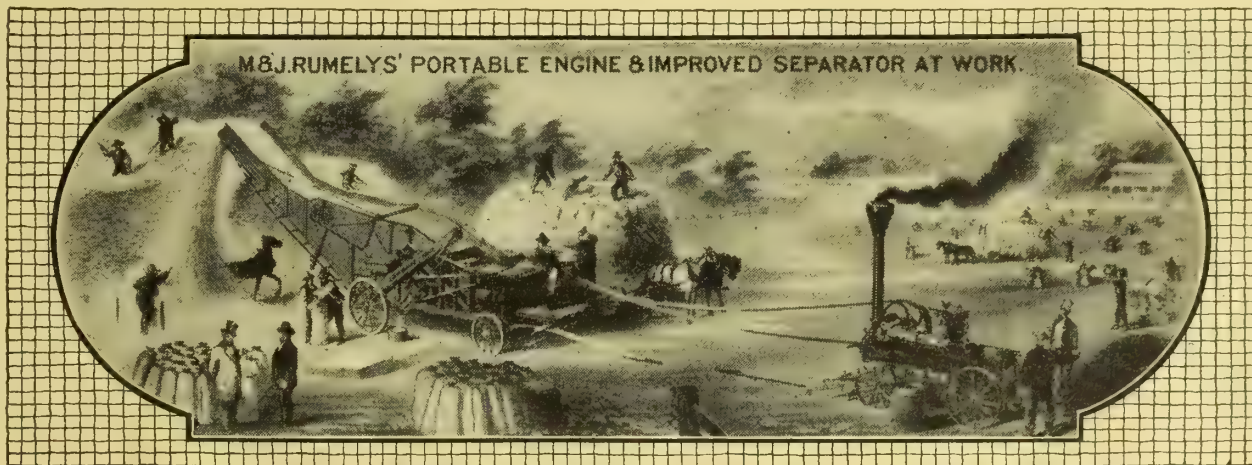
From the records that Mr. Mills has kept, he has threshed on an average of over 34,000 bushels a year, which would make a total of over 1,700,000 bushels threshed during his life as a thresherman.

Naturally the experience of a man like Mr. Mills was valuable to the Rumely Company in guiding the design of their machine. Wes' Mills has had many a session with the firm of Rumely regarding the manner in which Ideal Separators are built. He was influential in adding to the length of the separator—the Rumely is longer than any other separator of the same capacity. He was influential in improving the construction of the straw rack.

In his day he has seen the Rumely plant grow from a blacksmith shop to an immense plant covering 197 acres with facilities for building its product from the casting of the metal to painting the finished job.

"And, I want to say," states Mr. Mills, "That the present Ideal

is true to its name—ideal in every respect. When you stop to think that the improved chain rake and beater separates the greater part of the grain at the start and delivers it to the straw rack in a smooth, even flow—when you know how the lifting fingers in the Rumely thresher tear the grain apart and give the kernels practically no chance to escape to the straw rack—when you know that the extra long straw rack and the unusually large chaffer area again increases the amount of separation—you can judge pretty well of how wonderful a grain saver this Ideal separator is. The tailings elevator has mighty little to do in an Ideal thresher.



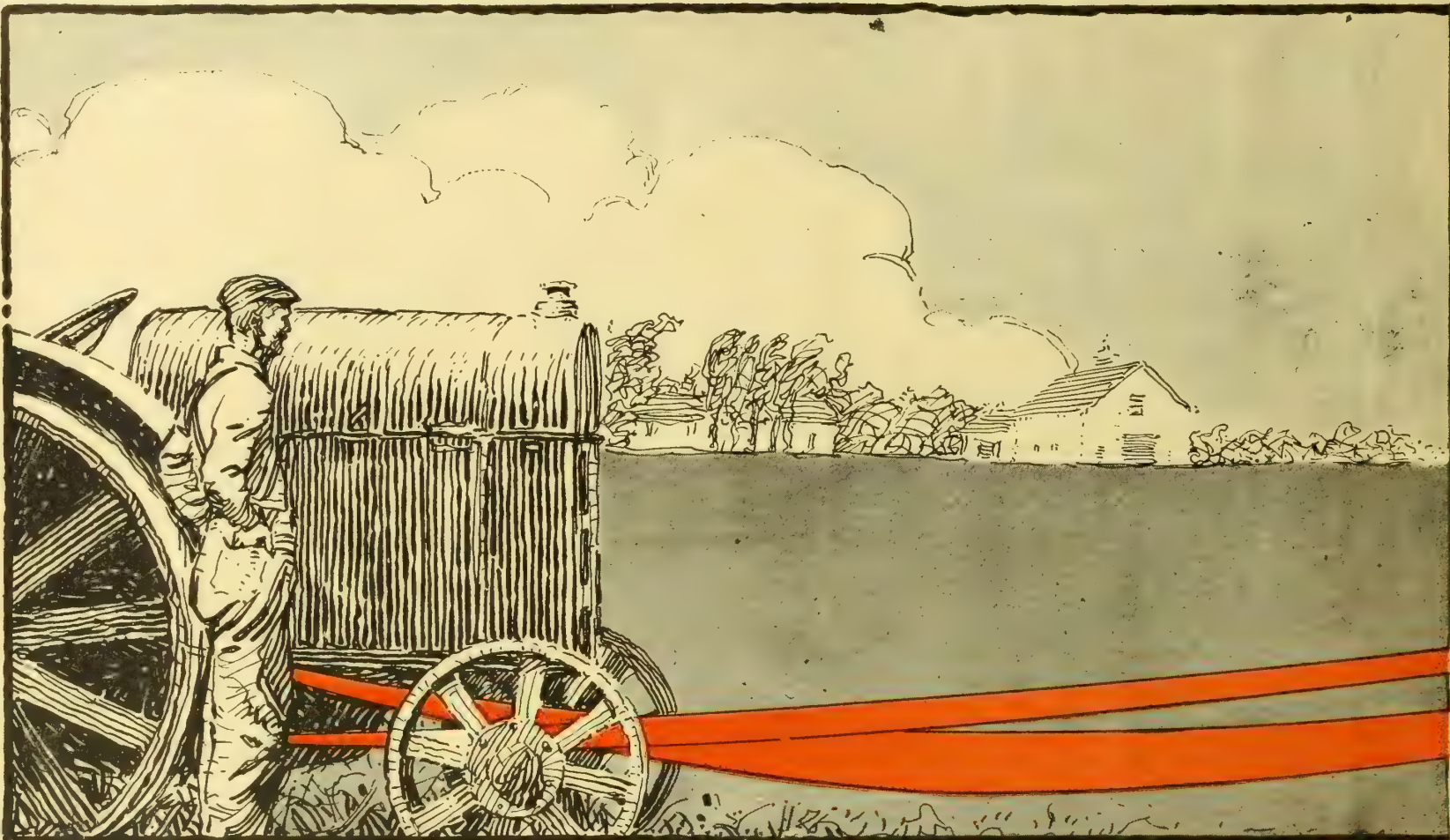
Above—Threshing in 1873. Center—"Old Long John" at work. Below—the first Rumely factory.

"And while we are talking about the Ideal separator, it is only fair that I should mention the OilPull tractor that should go with it to make a complete Rumely outfit. I consider the OilPull as good a tractor as the Ideal is a separator, and you can judge for yourself whether or not that is some recommendation."

"I know that the OilPull tractor will burn kerosene under any condition and the Rumely Company seems to be the only one that gives a written guarantee to every purchaser that it will do this. That speaks volumes in itself."

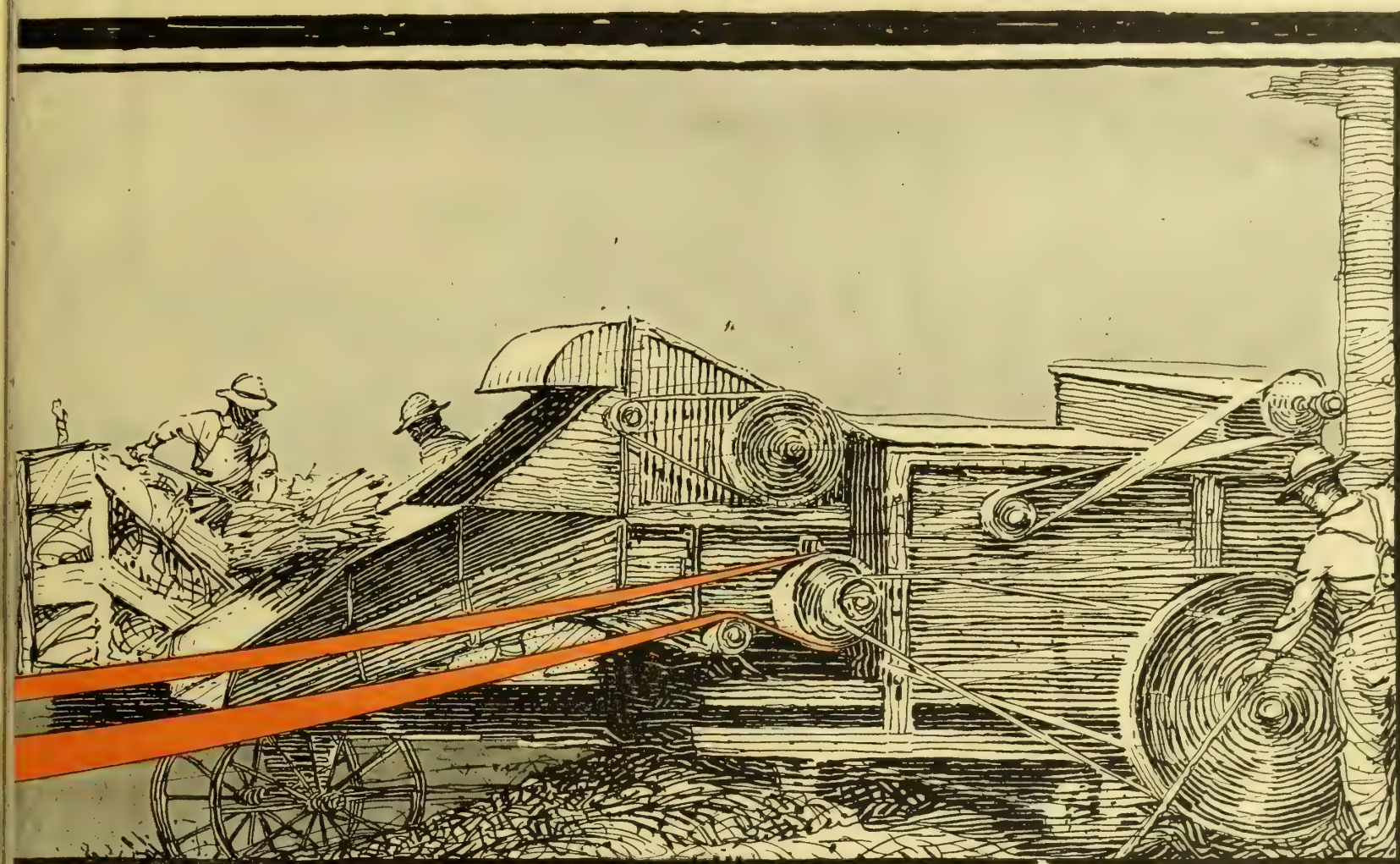
"Of course, I may be prejudiced in favor of the Rumely outfit, but if so my prejudice has far more than the ordinary good reason behind it—an experience of over half a hundred years. If I could talk to the farmers of this country who are interested in saving the greatest possible amount of their grain each year and operating their outfits at the lowest possible cost and with the greatest dependability, I would tell them to write for details of the Ideal thresher and the OilPull tractor to the Advance-Rumely Thresher Company, Inc., at LaPorte, Indiana."

TRADE **SAWYER** MARK
REGISTERED



United States Rubber Company

Endless Stitched Canvas Belts



Canvas Belts Preferred by Farmers


Farmers have tried all types of belts for farm power transmission. Their deliberate judgment, based on experience, favors canvas belts.

To a big proportion of experienced threshermen and power farmers, canvas belts mean *Sawyer Belts*.

Sawyer Canvas Belts run true. They do not stretch under normal loads. They hug the pulley faces evenly and transmit all the power. They are durable and give satisfactory service at the lowest belt cost per year.

We recommend *Sawyer Canvas Stitched Belts* for farm use. They are endorsed by thousands of farmers who judge value by the true test—proved performance.


United States Rubber Company



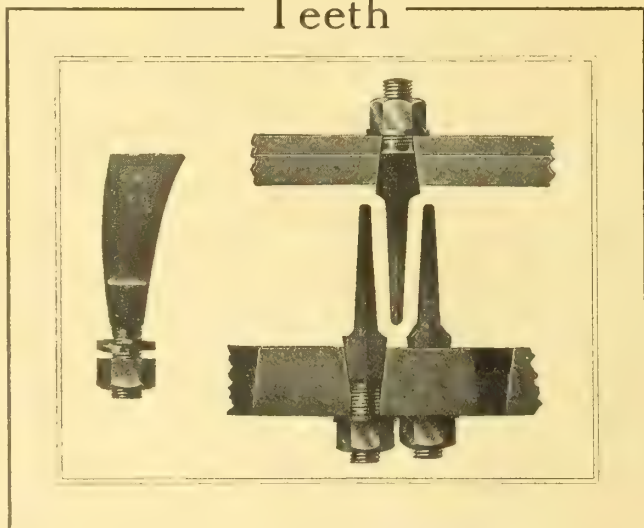
The cylinder teeth in the
**Greyhound
THRESHER**
are of the square taper shank
type, extra heavy. This type
of shank fits taper hole in bar
perfectly, thereby preventing
loose teeth, a common source
of annoyance in some ma-
chines. The teeth are guar-
anteed not to break.

Five Sizes:
22x36 — 24x40
28x48 — 32x54
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Write for Catalog



Teeth



THE BANTING MANUFACTURING COMPANY
114½ Superior Street TOLEDO, OHIO, U. S. A.

Mention The American Thresherman and Farm Power

Organization

The following meetings of interest to threshermen and tractor owners are to be held in the near future:

Monroe, Michigan, May 15, 1920.
Minster, Ohio, May 18, 1920.
Lima, Ohio, May 19, 1920.
Marion, Ohio, May 20, 1920.
Mansfield, Ohio, May 25, 1920.
Massillon, Ohio, May 26, 1920.
Chillicothe, Ohio, May 27, 1920.

No less an authority than our good field representative, J. B. Parker, is responsible for the statement that each meeting will be full of good things. At the Michigan meeting, Tom Walker of Toledo, Ohio, will make an address, as well as the respected secretary of the Michigan Threshermen's Protective Association, B. A. Dickey. Mr. George Durban, secretary of the Ohio Brotherhood, will explain the workings of the Ohio Mutual Insurance plan, at every meeting in Ohio. We trust that threshermen in the vicinity of these places will seize this opportunity to get some good information and join in making these gatherings a complete success.

The meeting at Minster, Ohio, has been made especially elaborate. This meeting will be called in the hall of the J. J. Dues Machine Company, at 1:30 P. M., May 18, and after Mr. Durban's address, the threshermen will hear Mayor J. E. Schmieder of Minster, J. B. Parker of Indianapolis, and J. R. Smith of the Minneapolis Threshing Machine Company. The Dues Company expects to secure some good music and give a real old-fashioned smoker for the visiting brothers.

Try to arrange your affairs to attend one of the Ohio meetings. You will find the time well spent.

New Jersey Threshermen and Farmers Association

The new secretary of the New Jersey Threshermen and Farmers' Association showed the right spirit by taking typewriter in hand and sending us a complete account of the successful meeting held at Trenton. Mr. Newsom has covered the matter so thoroughly in his complete report of his swing around the circuit that we are referring our readers to it. However, S. C. Coder's remarks are original and we wish to quote the following extracts:

"The eyes of the United States are at present watching New Jersey. You wonder why? Because it is wet and is fighting for wet doctrine. Possibly one of the events most important to mankind today, was the organization of the threshermen and farmers in an association which will hereafter be known as the New Jersey Threshermen & Farmers' Associ-

ation. Over five million bushels of grain were threshed in New Jersey last year.

"The weather man was not very considerate, giving us a bad day; nevertheless, a one hundred per cent meeting was held in the Republican Club Auditorium, Trenton, New Jersey, on Monday, April 5, 1920, and every thresherman, farmer and implement dealer present enrolled without any coaxing. Can you beat it?"

Mr. Coder then gives an account of the good speeches made, paying special tribute to our old war-horse of threshing democracy, J. B. Parker.

Let us hear from Trenton often. Let us think! Who was it—? Oh, yes, Woodrow Wilson.

One Prophecy Fulfilled

On January 5, 1920, the following announcement was sent from Henderson, Michigan, to a number of men who were deeply interested in the affairs of the Michigan threshermen:

"At a special meeting of The Shiawassee County Thresher Club, together with farmers of The Country of Shiawassee at Owosso, Michigan, on Saturday, December 27, 1919, the following resolution was passed and adopted:

"Be it resolved, that this gathering go on record as declaring that Act No. 180 of the Public Acts for the year 1917, being an act requiring the making of a weekly report by every thresher in the state of Michigan, is unlawful and unconstitutional and that it works an unnecessary hardship and inconvenience on the threshers and farmers of this state, and that we hereby authorize the issuing of petitions and circular letters to the farmers and threshers in order to raise money to have the said law declared unconstitutional by the Supreme Court of the state of Michigan.

"In pursuance to said resolution, I am herewith enclosing a petition which you are respectfully asked to circulate and to make such collection of funds as you are able in this good cause.

"This is a fight which is worthy of the best efforts of every farmer and thresher in the state of Michigan, as it is our contention that the said act was passed at the instance and request of the special interests and brokers and gamblers in the grains and produce of this great state.

"Trusting that you will give this matter your best attention and circulate the petition and make collection among as many friends and neighbors as you can reach, I am,

Yours very truly

WM. KOHLMAYER,

Secretary-Treasurer, Shiawassee County Thresher Club."

By April 26, Uncle Silas had received clippings from a number of different sources. Space prevents us

from giving the full articles printed in the Owasso Argus-Press and other papers, but we insert the dispatch from the Michigan State Journal.

Corunna, April 15.—Judge J. H. Collins, late Wednesday afternoon, ruled that the state law requiring threshers to make periodical reports to the secretary of state on the amount and kinds of grain threshed and the acreage required to grow it, was unconstitutional and directed a verdict of not guilty in the case of W. A. McAvoy of New Haven township, who operated his machines after his license had been revoked for failure to make the reports. The law was passed by the 1917 legislature as a war measure, for the benefit of the federal government, which desired statistics on the country's food supply. McAvoy claimed that the law confiscated the threshers' time and paid them nothing for it. The State Threshers' association was with him in his fight against the law.

McAvoy admitted on the stand that he had violated the law by operating his machines after his license had been revoked. He stated that he had tried to obtain the data desired by the Secretary of State from the farmers but that they had told him it was none of his business.

The defense swore Carl Young, president of the Michigan Federation of Labor, and John Scannell, secretary of the same organization, to show that the law was of no benefit to the laboring men. Mrs. I. Johnson, of Rushton, president of the State Federation of Farmers' Clubs, Mrs. Jennie Buell of Ann Arbor, secretary of the State Grange, and the presidents of several Shiawassee County farmers' clubs swore that the law was of no benefit to the farmers. McAvoy's contention is that the law was adopted for the benefit of the grain brokers.

Henry S. Sweeney, assistant attorney general aided Prosecutor Matthews in the case. The prosecutor said that the entire case hinged on a law point.

"It is not for us to say whether the law is a good one or not," he said, "but as long as it remained on the statute books, the secretary of state, the attorney general the sheriff and myself had no alternative but to enforce it."

While not mentioned in the above press notice, much of the credit for winning this case for the threshermen and Mr. McAvoy goes to our old friend, Wm. Kohlmeyer. He started the ball a-rolling, and he kept pushing until the grain gamblers were beaten.

Insurance for South Dakota

The idea of insurance "by the thresherman for the thresherman" grows with each month. We are glad to hear that South Dakota is achieving success along this line, as the following extracts from a letter of W. A. Swark, secretary-treasurer of the South Dakota Brotherhood, would indicate:

"The object of these meetings is to secure applications for the South Dakota Threshermen's Mutual Insurance Company, writing indemnity insurance and also fire, lightning and tornado insurance upon threshing and other farm power machinery. We are also in a position to write insurance on buildings but do not intend to push that end of the business as hard as the machinery insurance. At the present writing we have eighty-four applications for over \$110,000 worth of insurance, and have a sincere feeling that by the tenth day of May we will have our two hundred applications for \$200,000 of insurance and be issuing policies.

"After these district meetings, we are putting at least five men in the

field soliciting insurance, on a commission basis, each man to have his individual territory. Our president will put in the summer helping out these solicitors and in organizing county divisions in each county where there are enough threshers to justify the maintenance of such a division.

"The threshermen of this state are just now beginning to realize the good of having a state brotherhood and we are getting the best possible support wherever we go and surely expect to make the South Dakota Brotherhood one of the strongest in the United States in just another year or two.

"We were honored by a visit by Mr. John A. Scott of the Oklahoma Brotherhood a few days ago. Mr. Scott reported good progress in his state this spring. This is not surprising, as Mr. Scott is a live wire."

Michigan's State Boiler Law

The following letter was sent from the Board of Boiler Rules, Lansing, Michigan, to the Arbuckle-Ryan Company, Toledo, Ohio, and forwarded by Mr. Tom Walker to The American Thresherman and Farm Power.

"I am informed by the Attorney General's Office that the action taken by the Board of Boiler Rules, and already reported to you, exempting secondhand boilers used for agricultural purposes from the operation of the Michigan State Boiler Law has been adjudged as entirely proper action for the Board to take.

"Therefore, the situation is that second-hand boilers used for agricultural purposes are exempt from the application of the Michigan State Boiler Law.

Yours truly,

E. W. BISSELL,

Chairman Board of Boiler Rules.

Further comment is needless. The Board showed common sense and consideration in securing this decision for the threshermen, and deserves a great deal more praise than the legislature which passed this law.

Pennsylvania Threshermen Association

We are glad to inform you that we have put our Pennsylvania Threshermen and Farmers' Mutual Casualty Insurance Company over the top. We have secured our permit under date of April 1. The law requires a capital here of \$50,000. Our total at the time we secured our permit was \$52,000 to which we are adding each week. We received the \$52,000 from about twenty-five per cent of the threshermen and sawmill men of the state. We expect now that we are in shape to issue our policies to get a good per cent of the seventy-five per cent that we were not able to reach.

The officers of the company are H. S. Lee, president; T. G. Cooke, vice-president; and J. A. Rose, secretary-treasurer and general manager. E. G. Finley, assistant manager; Miss Pearl King, assistant secretary and the above form the executive committee. In the organ-



The Teeth Tell the Tale



S. A. Thompson of El Reno, Oklahoma, threshed 50,000 bushels of wheat with very heavy straw in 1919 with these teeth and the KIRBY NEW WAY FEEDER.

The KIRBY New Way Feeder handles more straw with one-half the tooth wear. It feeds the cylinder evenly, instead of crowding a wadded, packed bundle against the cylinder, and then holding the straw back while the teeth wear it out, and themselves as well. Every KIRBY proved this fact last year, by practically unworn teeth in the cylinder, after an entire season's threshing.

These cylinder teeth, illustrated here, tell the remarkable story of the KIRBY'S efficiency—how it gives a full, even feed thru the machine—how it saves power by reducing friction on the cylinder teeth—how it saves at least half the cost of teeth.

THE KIRBY NEW WAY



S. A. Thompson of El Reno, Oklahoma, threshed 30,000 bushels of wheat with light straw in 1918 with these teeth and another standard feeder, on the same machine.

The KIRBY does everything that can be done by any standard feeder—and more. It does in a simple, practical way, ALL the THINGS others try to do with complicated trigger work. When you see the KIRBY, no argument is needed to prove its simplicity and durability.

You can inspect your cylinder without the aid of a blacksmith shop or laying off your crew for time. Two or three quick moves—NO TOOLS—just your fingers, and the whole top and front of your cylinder is laid bare before you. Nothing in your way. And you close it just as quick.

Threshing season is right at hand. Fill out and mail the coupon for complete details of the KIRBY. The time is short—do it today.

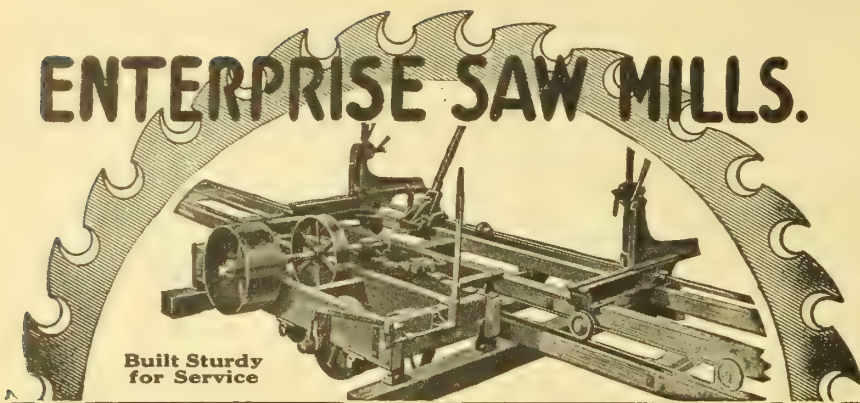
SOUTHWEST MFG. COMPANY OKLAHOMA CITY, OKLAHOMA

Southwest Manufacturing Co.,
Oklahoma City, Oklahoma.

Please send me your proposition on the KIRBY NEW WAY FEEDER.

I Own a..... Thresher
It has a..... Inch Cylinder
It Is Now Equipped with a..... Feeder
Name.....
Address.....

ENTERPRISE SAW MILLS.



Three Popular Features of Enterprise Saw Mills:

(1) **Big Production:** Enterprise Saw Mills are capable of cutting all kinds of lumber with dispatch and accuracy. This is due to correct principles of design and because sturdiness is embodied in every part of their construction.

(2) **Portability:** Enterprise Saw Mills are readily moved from place to place, and yet are as substantial when set as many stationary outfits.

(3) **Durability:** The simplicity and strength of Enterprise construction insures durability. There is an absence of complex mechanism and such features of design as are liable to prove troublesome and wear out quickly.

These features make Enterprise Saw Mills an attractive investment proposition.

The Enterprise Company

Eastern and Export Office:
136 Liberty St., New York, N. Y.

1050 Main Street
Columbiana, Ohio



Corn Shellers

"Famous Wherever Corn Grows"

JOLIET MFG. CO., JOLIET, ILL.

Not only the oldest, but the largest and only exclusive manufacturers of power corn shelling machinery in the country.



Stop! Look! Listen!

Many states compel threshermen to operate under the Workmen's Compensation Law, while others leave it optional whether they operate under the Workmen's Compensation Law or Common Law. The amount of their liability to employees is reduced by operating under the Workmen's Compensation Act. No law suit with big court cost and attorney fees to pay. The law in many states makes the farmer pay for injuries to a thresherman's employe, if the thresherman is not financially able.

Protect your customers. Provide compensation to disabled employes. Operate under the Workmen's Compensation Act and insure in a good Mutual Insurance Company writing Workmen's Compensation Insurance. Our insurance policy will do all this for you. You should insure in the Indiana Liberty Mutual Insurance Company—for:

It has \$10.00 for each dollar it actually owes.

Its organization has saved its thresher policy holders approximately \$350,000.00 with an average of approximately \$70.00 per year per policy.

Its contingent refund averages 15% of premium, thus reducing the second and each succeeding premium. The profits of insurance are saved for the policy holders.

It has the official endorsement of the Threshermen Brotherhoods of Indiana, Illinois, and Kentucky.

It has loss reserves as required by law of more than \$35,000.00 with approximately \$10,000.00 of losses to pay.

No thresherman should hesitate to insure in this strong substantial company and get insurance at actual cost.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY
624-25 OCCIDENTAL BUILDING
INDIANAPOLIS, IND.

ization of this company we had the assistance of Mr. Finley, who has had a prominent position in the State Fund, and of Mr. Allen, who was formerly the assistant manager of the State Fund. In fact, it was Mr. Allen who organized the State Fund in connection with the insurance department. Mr. Allen is our attorney in all matters pertaining to insurance. In securing the services of Messrs. Finley and Allen, our company has the benefit of the two most experienced and best posted men in the whole field of compensation insurance.

In the organization of our company we had the active support of W. H. Newsom, president of the National Association of Indiana and the enthusiastic boosting of J. B. Parker and Harry Kellogg at our state convention.

We want to express our thanks to The American Thresherman and Farm Power for the help and co-operation of Mr. Parker and the publicity given by the splendid paper.

J. A. ROSE, *Secretary-Treasurer.*

Missouri Thresherman Organize

The first annual convention of the Missouri Brotherhood of Threshermen was held at Macon, Missouri, April 19, 20 and 21, 1920. April 19 was given over to registration and getting acquainted.

Monday at 1:30 P. M. the meeting was called to order by Albert Smith, acting secretary, who told the threshermen the object of the meeting, and introduced Joshua Bohannon, president of the Kentucky Threshermen's Association, to act as temporary chairman for the day. Mr. Bohannon made a very interesting talk on what an organization had done in his state, and appealed to the men in the audience to become members of the Missouri Association at once.

Owing to the weather conditions, the attendance was not large, but every thresherman present was deeply interested in Brother Bohannon's address as was shown by the deep attention and hearty applause.

J. B. Parker, of The American Thresherman and Farm Power, followed by Mr. Bohannon, his subject being an earnest appeal that every thresherman present join the Missouri Brotherhood. Mr. Parker thoroughly explained the value of an organization to the threshers of the state of Missouri, and told the boys what B. B. Clarke had done for the threshers of the United States through his twenty-two years of struggling to get the threshermen up on top, where they belong.

Tuesday forenoon was taken up with very interesting addresses from W. H. Newsom, president of the National Brotherhood of Threshermen.

Joshua Bohannon and I. N. Snook.

president of the Iowa Threshermen's Association, then spoke. W. H. Newsom acted as temporary chairman. He introduced Mayor Nat M. Lacy of Macon, Missouri, who extended a very hearty welcome to the threshermen assembled and spoke of the wonderful resources of Macon County, and also stated what organization meant to all lines of business. His address was received with hearty applause.

J. B. Parker, who responded, assured his Honor, the Mayor, that he felt that every thresherman present would return to his home feeling that he had been a welcome guest of the city of Macon. He also dwelt at length on what organizations meant and said that the threshermen today were working under different conditions than before. He urged the threshermen to start out with their



Albert Smith, Durham, Missouri.

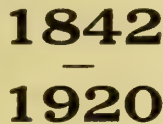
1920 runs by adopting strictly business principles, and to be sure and figure the cost, including the overhead expense, of operating the machine. The threshermen present surely appreciated his advice.

John R. Myers, of the George O. Richardson Machinery Company, was called on and assured the threshermen present that the manufacturers were deeply interested in their success and stood ready and willing to back them up in any way, and explained the value of an organization.

At 2:30 P. M. reports of committees were heard and adoption of the constitution and by-laws took place.

Next was the election of the staff of officers as follows: president, J. D. Bannister, Monroe City, Missouri; first vice-president, Rufus Palmer, Columbia, Missouri; second vice-president, W. A. Goodrich, Moline, Missouri; third vice-president, C. E. Taylor, Trimble, Missouri; fourth vice-president, W. T. Van Skike Macon, Missouri; secretary-treasurer, Albert Smith, Durham, Missouri.

Officers were duly installed by



RUSSELL

THE OLD RELIABLE LINE

COST LESS—LAST LONGER

HOO-HOO Belting is made from extra heavy duck and has four rows of stitches to an inch. It is treated with a special compound that keeps it at all times pliable and unaffected by unnatural conditions, such as water, steam, heat, acid fumes, etc. It will not crack or harden and is of strictly uniform quality, carefully stretched and seasoned before leaving factory.

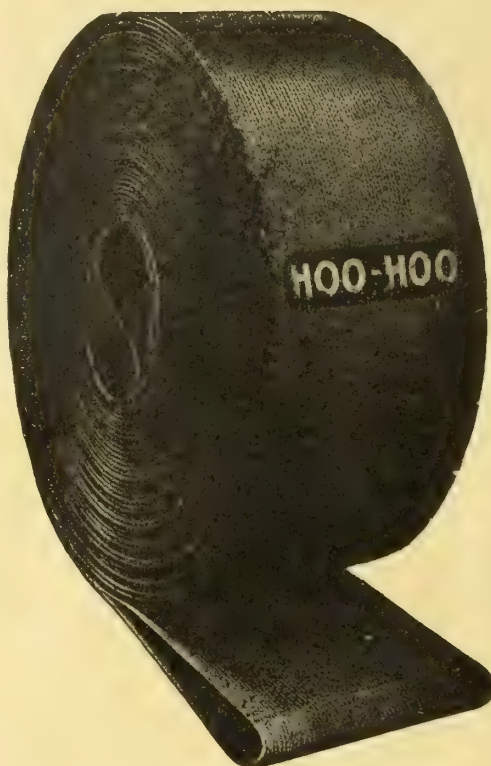
HOO-HOO Belting will transmit the maximum power, stand an unusual amount of abuse, which enables you to thresh more grain per hour. It is the highest class thresher belt manufactured.

HOO THRESHER

Net Cash Prices

Lgth Ft.	Width In.	Ply	Each	Lgth Ft.	Width In.	Ply	Each
50	5	4	\$22.05	100	7	4	56.25
50	6	4	25.65	100	8	4	63.45
75	5	4	31.95	125	6	4	61.20
75	6	4	37.35	125	7	4	69.75
100	5	4	42.30	125	8	4	78.75
100	6	4	49.50	150	7	4	83.25

Terms, cash to accompany order. Freight prepaid.



GUARANTEE

Belts should be run in the center of the pulley and should not be held in place by any object that will injure or break the edges.

Results of overloading, injurious use of belt dressings, or chafed, frayed or nicked edges do not constitute defects.

Positively no allowance unless claims are made within 30 days from date put in use and belt returned to maker, freight prepaid, with the guaranteed tag attached.

We will replace any belt proving defective in material or workmanship.

HOO BELTS

Net Cash Prices

Lgth Ft.	Width In.	Ply	Each	Lgth Ft.	Width In.	Ply	Each
150	8	4	93.60	160	8	5	124.65
150	9	4	103.50	160	9	5	137.25
125	7	5	87.30	150	8	6	140.85
125	8	5	98.10	150	9	6	155.25
150	7	5	103.95	160	8	6	149.85
150	8	5	117.45	160	9	6	165.60
150	9	5	129.15				

Terms, cash to accompany order. Freight prepaid.

If interested, we shall be pleased to quote prices on "HOO-HOO" Canvas Stitched Belting in Rolls, Oak Tanned Leather Belting and Lace Leather. Also any length, width or ply endless belt not mentioned above. 5% discount for group purchases of five or more belts.

Please Mention Length, Width and Ply Required

National Leather Belting Company, 342 East Thirty-Eighth St. New York City

Mention The American Thresherman and Farm Power

W. H. Newsom. Albert Smith was elected delegate to the National Convention.

Joshua Bohannon followed with one of his characteristic addresses, which was full of enthusiasm from start to finish. He stated in detail what they had accomplished in Kentucky in defeating a bill introduced in their legislature which, had it become a law, would have put every traction engine off the highways; also, what it would mean to the agricultural industry of the United States should such laws have been passed in the grain growing states,

especially at this time when intensive farming is so much needed. He was followed by I. N. Snook, who went into detail as to what had been accomplished in Iowa. He mentioned the many settlements that had been made for the members of their organizations, who had been fortunate in bridge actions. One widow especially was mentioned who had received \$5,500, her husband having lost his life by his engine going through a bridge.

W. H. Newsom was ready at all times. He explained fully what had been accomplished by the National

Association of Brotherhoods through their efforts and with the assistance of the manufacturers and the Tractor Club of Kansas City, Missouri. They were the means of defeating a cleat law bill which, if passed, would have put every traction engine user off the roads. Mr. Newsom is surely the right man in the right place and he has the interest of every state organization at heart.

W. R. Ellis of the J. I. Case Company of St. Louis, Missouri, spoke from a manufacturer's standpoint, and assured the threshermen that the manufacturers were deeply inter-

ested in the success of every organization and that he felt sure that every manufacturer of threshing machinery was ready and willing to render assistance whenever called on. He urged the boys to stand firmly for their organization, and for them to return to their homes and see to it that a county organization was perfected. He was followed by several of the threshermen who stated that they felt well paid for their time and money spent in attending the convention. Chairman Newsom adjourned the meeting.

Wednesday, 9:00 A. M.—Meeting called to order by W. H. Newsom. Mr. Newsom explained the fire insurance laws of the Indiana Brotherhood, and urged the Missouri boys to get busy and organize strongly enough to handle their own insurance. He also explained the advantage of the workman's compensation insurance.

Mr. Bohannon followed with a few closing remarks to the threshermen, and called J. B. Parker to the platform, who told the boys that he would be glad to see Missouri put over one of the largest organizations on the map.

Albert Smith talked to the threshermen on county organization, and urged every man present to get busy and see that his county was organized at once; he received the hearty

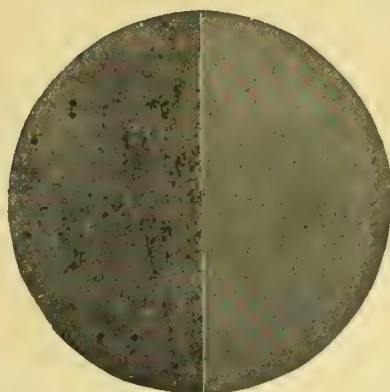


The Threshermen Who Attended the First Annual Convention of the Missouri Brotherhood of Threshermen, Macon, Missouri, April 19, 20 and 21.

(Continued on page 55.)

—1 DROP FOR 15— MOTOR REVOLUTIONS

Used oil as seen through the microscope. Note the grit and punctures in the film.



Fresh oil as seen through the microscope. Note the smooth, unpunctured film.



Fresh oil is a much more efficient lubricant than used oil.

Tractor motors equipped with the Madison-Kipp System are lubricated by fresh oil fed drop by drop at precise intervals.

In a typical four-cylinder motor, one drop of fresh oil is enough for fifteen motor revolutions.

A series of tests on this motor proved that fresh oil lubrication effected a saving of 83% in the amount of oil required for each brake horsepower hour.

Together with this substantial saving of oil, there was a saving of 13½%—more than one-eighth—in the amount of kerosene used.

In addition, the fresh oil system increased the maximum operating load of the motor to thirty-two horse-power, as against only twenty-seven and one-fourth with the used oil system of lubrication.

These and many other tests are available for inspection to any one interested.

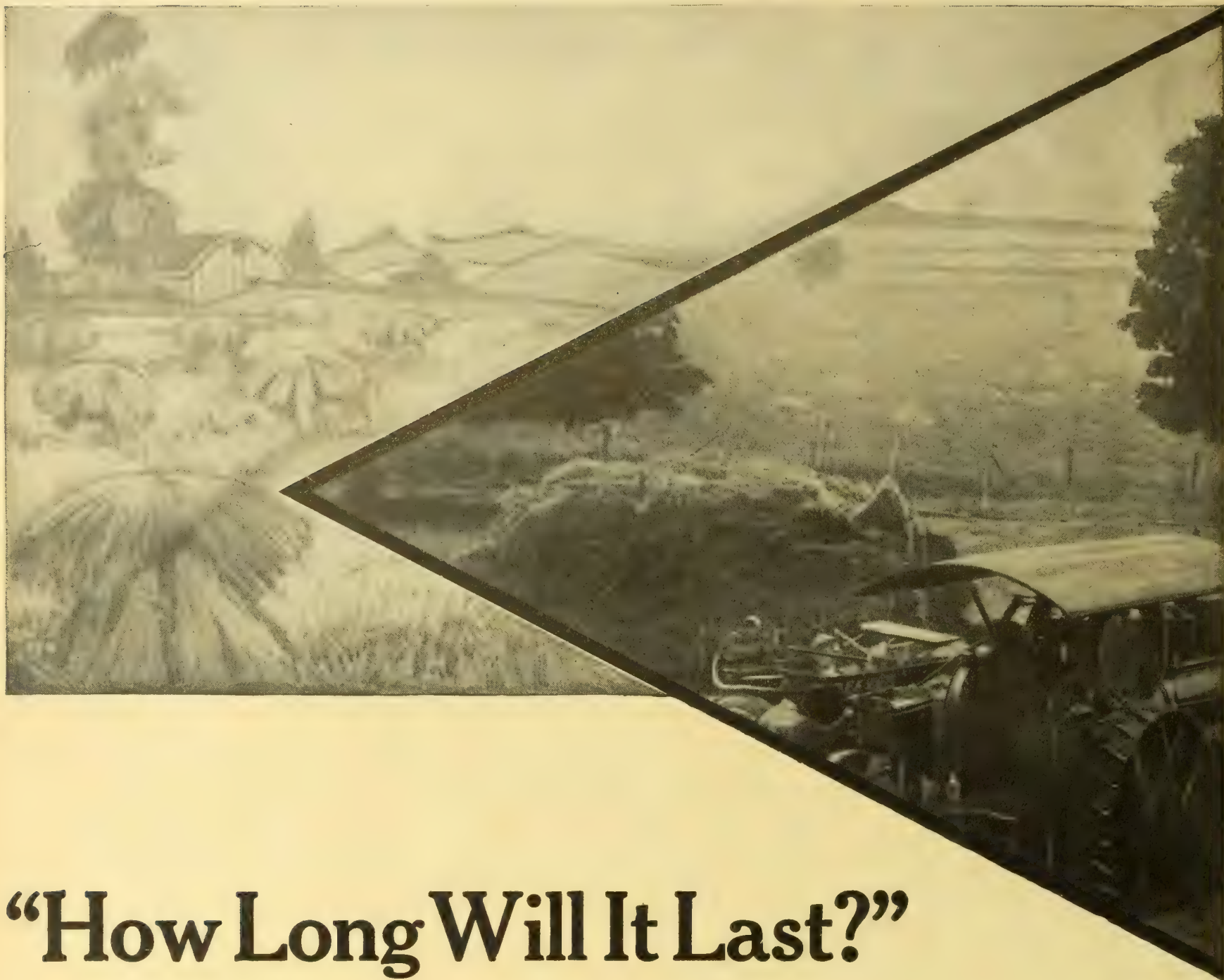
Similar results have for many years been demonstrated in the field by tens of thousands of two-cylinder tractors.

The natural consequence is a decided preference for Kipp-Equipt motors among experienced tractor users.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators





“How Long Will It Last?”

THAT question is uppermost in your mind when you are considering a new threshing outfit. You want to know that with reasonable care it will still be doing good work ten, fifteen or even twenty years from now. Every rig looks well on the sample floor, but years of constant use really measure its value.

E-B Threshing rigs have demonstrated their permanence many times. Machines sold twenty and thirty years ago are still separating grain from the chaff and straw. Such performance is not surprising when only the very best materials and workmanship are used in their manufacture.

The standard of quality of E-B Machines is constantly safeguarded by the most rigid tests of raw material and finished product. E-B engineers and factories are ideally equipped to produce threshing outfits which will give years of service.



Emerson-Brantingham

Established 1852



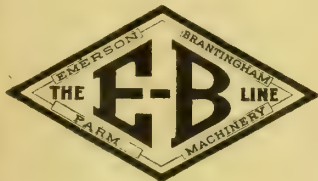
E-B Threshing Rigs Handle Any Size Job

WHETHER you want an individual threshing rig, a community outfit, or a large custom rig, there is an E-B outfit to meet your needs. Satisfactory, gratifying service is guaranteed for all—in fact, quality must go in the machine before the E-B trade mark goes on it.

For those who desire simplicity in operation and adjustment, with perfect cleaning ability, the famous E-B line of threshers have no equal. The E-B Reeves and Geiser lines of threshing machinery are known wherever threshing is done.

Let your dealer show you the E-B features of design and construction that form the firm basis of a far-reaching reputation.

*A Complete Line of Farm Machinery Manufactured
and Guaranteed by One Company.*

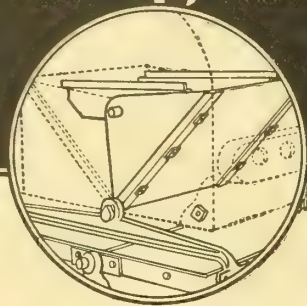


Implement Company, Inc.

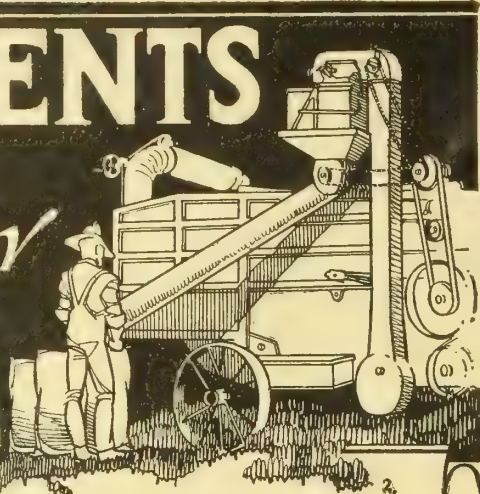
Rockford, Illinois

CLEMENTS

Grain Weigher



Cross section view—
showing shifting valve



Automatic self-locking

Absolutely all leaking of grain eliminated by the "Clements." After each dump weigher automatically locks itself, until full weight is received in weighing hopper. Double weighing hopper takes grain in a steady stream. Flow of grain from elevator never stops. You are never bothered with a clogged head or elevator, no matter how damp the grain. Farmers all over the country prefer their threshing done with a "Clements" Double Hopper Self-Locking Grain Weigher.

Gives the Thresherman and the Farmer a square deal

With a "Clements" you can not over-run or run short. Not a single grain can run through. Simply set your scale for dumping at the required amount. Your tally will be exactly

the same as that at the elevator. The "Clements" assures satisfaction to you and to the farmer. It weighs automatically, is independent of gears and cannot make a mistake.

Write for Catalog

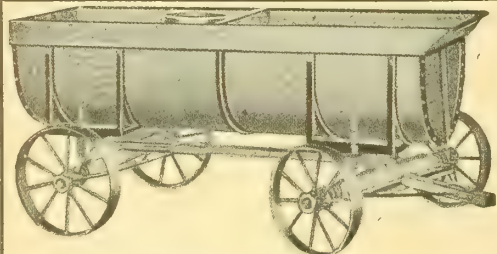
We will send you, free, our catalog which will fully illustrate and describe this gearless, double hopper, self-locking Grain Weigher. The "Clements" is a time, labor and money saver to all threshermen.

Dept. 2.

IDEAL Grain Weigher Company
PEORIA, ILLINOIS

CLEMENTS Grain Weigher

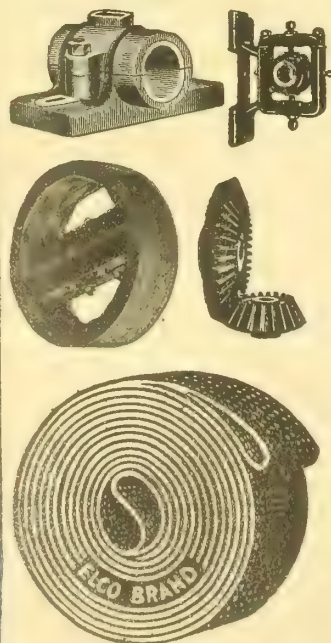
Mention The American Thresherman and Farm Power



Use a
"STUTZ"
Steel Thresher Tank
and eliminate your tank troubles.
Quality guaranteed. Catalog and
prices for the asking.

Star Tank Company
Goshen, Indiana

Mention The American Thresherman and Farm Power



Power Transmission

Our No. A-75 Catalog shows a full line of pulleys, sprockets, hangers, bearings, belting, conveyors, etc.,—everything for power transmission at money saving prices.

We will be glad to mail you a copy of this catalog upon request. It will provide a prompt source of supply for all your transmission needs.

B.F. GUMP & CO.

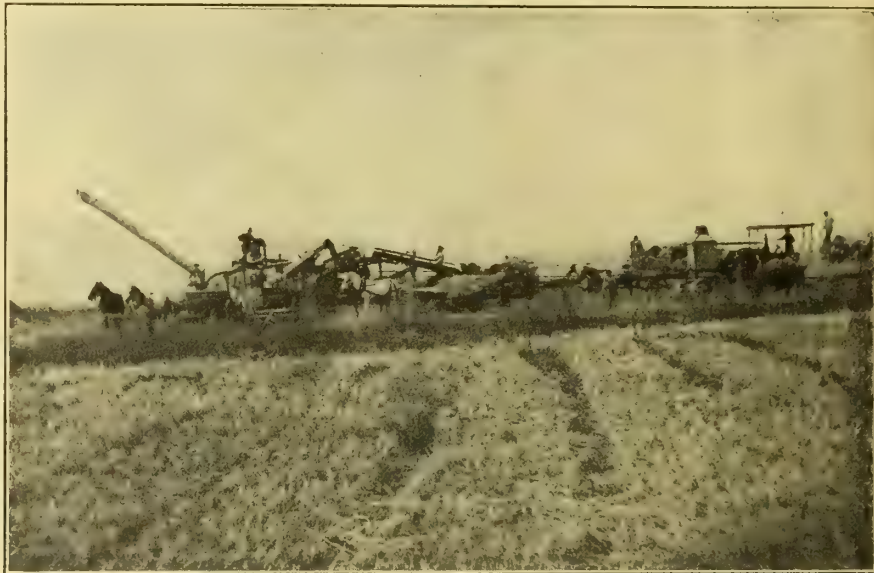
431-439 SO. CLINTON STREET
CHICAGO, ILLINOIS

Mention The American Thresherman and Farm Power

Correspondence

I am sending you a picture of my threshing rig which I have run for three years. It consists of a 25-45 Rumely oil engine and a 32x54 separator. It takes two men to run this rig and we ran it when it was six below zero. We never had any trouble starting after we had learned our engine. We can thresh eleven hours on fifty-five gallons of kerosene.

cut off, all large logs ranging about five hundred feet to the log. We own and run our farm of two hundred seventy-six acres. One hundred and fifty acres of this is all large oak and chestnut, and some large white wood. We sell our lumber right here from the mill at a good price. Lumber is getting higher all the while. It pays to sort the lumber into its



Threshing Rig Run by S. L. Gross for the Last Three Years.

In 1918 we threshed fifty thousand bushels of grain. S. L. GROSS.
Kuna, Ida.

classes as it is sawed; it saves time in sorting when stacking it.

I have two threshing rigs. One is a Minneapolis 20-horse power engine and a 36x60 separator. The other is a Minneapolis 22-horse power engine and a Case 40x62 separator. I also have a Minneapolis corn sheller. I sure am well pleased with the Minneapolis machinery, because it is easy to run and does good work. OTIS GOODSON.

This country is somewhat hilly and sandy, but most of the roads are graveled and are in good condition. We have a few bad bridges. The last wooden bridge, which was one hundred feet long, went down last fall with a ten-ton truck loaded with one hundred and twenty cans of milk. This bridge was replaced with a concrete span, now suitable for heavy loads.

Mantua, O. FRED O. HAAS.

Garrett, Ill.

We own and operate a 16-horse power new Frick steam engine and a 27x42 Aultman & Taylor separator. This makes a very good outfit, but all machines will do good work if operated correctly. In 1919 we had a large run. We only laid off three days on account of rain. We finished threshing September 30 and then we started filling silos. We filled twenty-seven silos and all were full but three, and all were from one hundred twenty to one hundred sixty ton silos. We used a sixteen inch Papee silo filler with conveyor.

We got seven cents for wheat, five cents for oats, eight cents for rye, fifty cents a bushel for timothy and three dollars fifty cents an hour for filling silos. All the farmers seemed to be satisfied and asked us to come back next year.

In winter and spring we saw lumber. Most of our lumber is chestnut, white and red oak, beech and maple. The timber around here has not been

I am enclosing check to cover my renewal to The American Thresherman and Farm Power, and to the Tractor and Gas Engine Review. I have taken your papers for several years and I expect to take them as long as I have a dollar. I am also sending you two subscriptions for two of my neighbors.



B. B. Bates's Threshing Outfit.

I have threshed for over twenty years. At present I have a Gaar-Scott engine and a Case separator. I get five and seven cents for threshing and furnish only machine crew, three men. I keep my machine in the best possible running order. I

try to do good work and do it as quick as possible, and I find very few complaints.

I also have a silo cutter. My buildings are all equipped with electric lights and a heating plant in the house. I am enclosing a picture of my rig taken while threshing the last job last fall, November 12. It was seven below zero.

B. B. BATES.

Randall, Minn.

I have been a reader of your magazine for the last three or four years and enjoy it very much. I have been threshing for seven seasons and like



A. A. White Threshing in Jefferson County, Missouri.

the work quite well. We have some pretty rough country to pull through in this part of Missouri. I operate a Rumely Oil Pull 15-30 tractor and a Rumely Ideal separator, 30x48 size. I am sending you a picture of my outfit threshing on the Pipkin

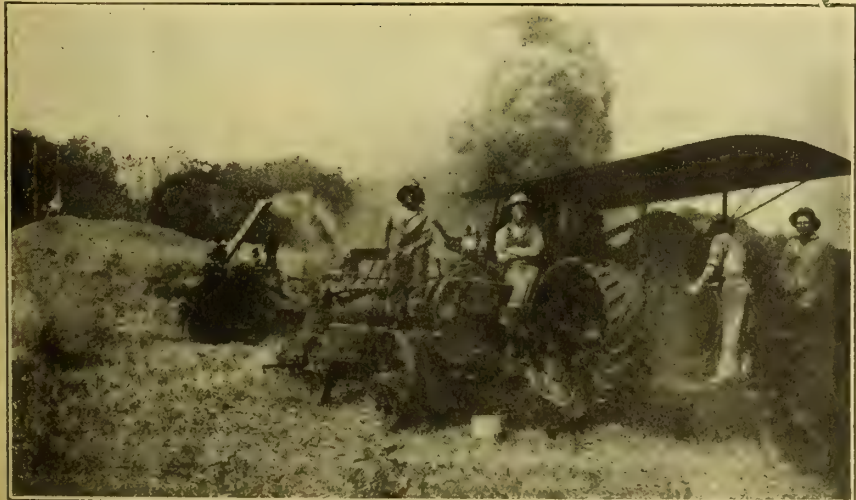


A. A. White's Hungry Bunch Eating Chicken Dinner.

farm for Carl Jones in Jefferson County, Missouri, and the other picture shows the hungry bunch at the hardest job of all.

A. A. WHITE.
Kimmswick, Mo.

I am a reasonably young man but have had one year more than a quarter of a century's experience with threshing machines. I always have taken a great deal of interest in the business and feel that I have learned much about it, but I have



Threshing Wheat in Southeast Kansas with a Rig Owned and Operated by Joe Darling.

not learned it all yet by a good deal. I always am on the alert for new ideas and therefore I am much interested in reading letters from brother threshermen in your magazine.

My first experience twenty-six falls ago was with a 34x54 O. S. Kelley Springfield separator and automatic stacker, and a 10-horse power Nichols & Shepard engine. I operated this rig eight falls and sold it to buy a Buffalo-Pitts separator and a 16-horse power Reeves engine. I operated this rig for eighteen years before selling it, and it still is doing good work. My present outfit consists of a 22-horse power Advance engine and a 32x54 Avery separator.

I can run either end of a threshing outfit. I hire both an engineer and a separator man, and I work with the boys on both ends. I always aim to be boss on the job, but I treat my men as I would like to be treated myself and pay good wages. If you do not take an interest in your men, you cannot expect them to care much for you.

I always put my rig in first-class condition and keep it that way, no matter what it costs, and I find this much cheaper than to try to save money on repairs. Above all things, do as you agree to do and never promise to do something you cannot fulfill. If in order to hold down a job you make promises that you cannot live up to, it will be sure to cause trouble or dissatisfaction in the end.

The grain was not very good in this section of the country last year. There was a very heavy crop of straw and the black rust damaged our crop. My machine ran fifty-three and one-half days and earned four thousand dollars. All of my customers are first-class pay. I get eight cents for wheat, five cents for oats, in the shock, six cents for wheat and four cents for oats in the stack. There are a great many threshing machines here and there are some price cutters. A good thresherman does not need to worry much about the price cutters. Once in a while they will get in a little on



convenient!

For Ditching

Inserting in holes in the ground a number of cartridges primed with electric blasting caps, connecting the cap wires with a blasting machine, thrusting down its handlebar and releasing the sudden strength of twice ten thousand men—that's ditching the modern way with



Red Cross Dynamite

Seventy-five million acres of swamp land in the United States lie waiting to be drained, and on nearly every farm there are stumps and boulders to be removed, trees to be planted. Put this Giant Farm Hand to work for you. If your project warrants, we will send a demonstrator to show you the safe, easy, inexpensive way of doing your work—the Red Cross way.

See your Dealer. In any case, find out what Red Cross can do for you—and how. Write for "Handbook of Explosives" today.

E. I. du Pont de Nemours & Company, Inc.
Sales Dept.: Explosives Division
Wilmington, Delaware

"You Can't Get Away from It" says the Good Judge

A little of the Real Tobacco Chew gives more genuine satisfaction than the big chew of the old kind.

Saves money, too—because this class of tobacco lasts much longer. The rich tobacco taste stays right with it.

Any man who uses the Real Tobacco Chew will tell you that.



Put Up In Two Styles

RIGHT CUT is a short-cut tobacco
W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Study at Home! Learn Traction Engineering while you are working and earning money. We'll teach you by mail while you are working and earning money. Send for catalog. Address
Clarke School of Traction Engineering Madison, Wisconsin



Saturn Rubber Endless Thresher Belts

They do not absorb moisture, have minimum stretch and long life.

If your dealer cannot supply you, address

The Gutta Percha & Rubber Mfg. Co.
303 W. Randolph Street, CHICAGO

New York Chicago San Francisco
Boston Seattle

Whether You Saw Wood, Grind Feed, Shell Corn

or do any other work with belt driven power you can save dollars and dollars by lagging your machine and engine pulleys with *Washington Superior Pulley Covering*.

It will save you many times its cost in wear of belts alone, besides greatly increasing your output every day you operate. Has been the standard since 1902 and is better every year.

Any handy man can use it without rivets or removing pulley from shaft. Write for sample and prices today.

W. S. Raymond, Mfr. 708 Chicago Road Niles, Mich.



Start Your Son In Business

Keep Him
On the
Farm!

WE HAVE started hundreds of men--farmers and farmers' sons --in the big-money business of ditching. No end to the work to be had. No real limit to the profits!

Right in your locality--spare time or full time--you can do what others are doing everywhere. That means net earnings of five thousand dollars a year or more. It means a business of your own *with work always waiting*. It means interesting work that is easy and requires no experience.

We will show you how to do this with a

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

This ditcher cuts through frost and hardpan. It gives you 100 to 150 rods of ditch each day--every foot clean, smooth, true to grade and ready for tile. Furnishes its own power. Operates well in swampy land.

Get This Free Book

Write us today. Tell us the soil conditions in your vicinity and average depth of ditching. We will then send you a free copy of our big book, "Dollars in Ditches." And our service engineers will tell you the exact size ditcher you need. They will show you how to get started *right*--show you how others make big money--*and how you can make it too*.

Hundreds of Letters Like This

"I excavated a trench 16,000 feet long, average depth 25 inches. I received 1c per lineal foot, or \$160 for the job and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him, tightened the governor to gain speed and in 2 3/4 hours had the job done. Average of 800 feet per hour for the 2 3/4 hours at 1c per foot is \$8.00 per hour."

JOHN C. OPFER, SANDUSKY, O.

Write today for full details. No obligation.

The Buckeye Traction
Ditcher Co.

194 Crystal Ave., Findlay, O.

your run, but they will learn sooner or later that there is nothing to it.

In some communities when the farmers cannot find a price cutter, they get together and buy an outfit of their own. Sometimes this is satisfactory, but more often things do not run smoothly. Threshing is a business and everybody does not have an aptitude for it. It requires a good mechanic and a man who is not afraid of the dust as well as a business man to be a successful operator of a threshing rig.

JOE DARLING.

Cherryvale, Kans.

I run an 18-horse power Advance engine and a 32x52 Rumely Ideal separator, which I think is as good an outfit as most threshers would care to run. As far as engines are concerned, I would rather run an Advance than any other make. I can run this engine ten hours on twelve hundred pounds of coal and twenty-five barrels of water, threshing all the grain that can be decently put through the separator. I do my own engine repairing. I believe that anyone learning to run a steam engine should also learn to adjust and repair all parts and thoroughly understand them. I find it pays by far in the long run.

I have followed the threshing game for some time, but last season crops were very poor on account of the rainfall in the spring.

CLAYTON L. AVERY.

Tecumseh, Mich.

If a few more like Mr. Elsey would write, the younger generation could learn more of our grandfathers' time, which I believe would be of great interest to many of the readers. I am thirty-two years old and have been in business for sixteen seasons and have never seen a horse power work.

At the present time I own three rigs, a 16-horse power Nichols & Shepard and a 32x52 Advance feeder and blower; a 20-horse power Reeves and a 32x56 Minneapolis separator; and a 1919 Nichols & Shepard outfit consisting of a 20-horse power engine and a 36x56 separator. These are all good machines if properly

handled. The Nichols & Shepard seems to have the lead over other machines in this part of the country.

I also have a 15-horse power Ohio silage filler and a Heilman double saw rig. There are quite a few lime pulvers in this country and a continuous call for engines.

I am of the fourth generation in the family that has threshed, and I have a son three years old that I think will be a thresherman some day.

H. W. HENSON.

Dow, Ill.

I have been a reader of The American Thresherman and Farm Power for about ten years. I only wish that it came twice a month instead of once.

I am enclosing a picture of our threshing outfit. It consists of a



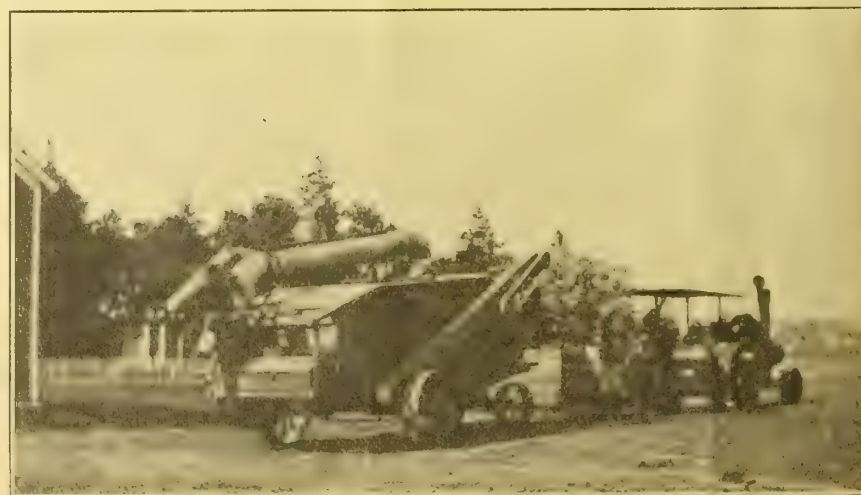
Two Views of the Threshing Outfit of Bauer & Jasper, Richland County, Wisconsin.

20-60 Advance rear mounted steam engine, and 32x52 Rumely Ideal separator equipped with a Carpenter wing carrier. I believe this is the best attachment ever put on a machine. One man can pitch an ordinary size stack alone and do it easier with this carrier than two men could with the old style feeder. The wings on these feeders can be let down clear to the ground. I do not say that we have the best outfit, but I do believe that a better one cannot be made.

JOHN N. BAUER.

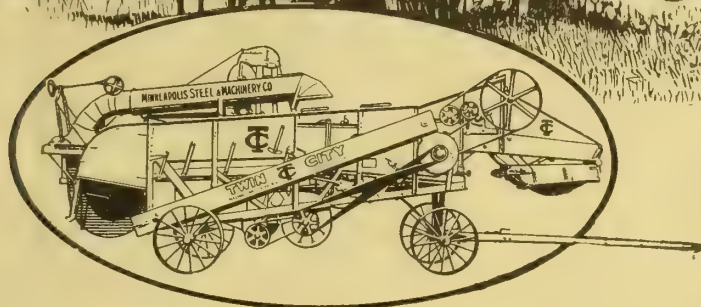
Cazenovia, Wis.

One rat will eat or spoil four bushels of grain a year.



Here Is a Picture of the Rig Belonging to Fadschild Brothers, Millerton, Nebraska.

22-42



12-20

The Twin City "Team of Steel"

Special Features of The All-Steel Twin City 22-42 Thresher

Larger separating area than any thresher of equal size.

Auxiliary Tailings' Cylinder (with delivery direct to grain pan) where tailings are re-threshed till all the grain is separated. Adjustable Sieves that handle all kinds of grain. Cylinder and Windstacker run on Hyatt Roller Bearings.

Simple to operate and care for; quick and easy of access.

All bearings *outside* and may be oiled while machine is in motion. All-steel construction makes them proof against fire, warp-age or decay.

Long, low-set Feeder makes pitching easy.

The Disc Spreader and Pickering Governor permits running to full capacity without slugging or choking.

The Twin City 22-42 Thresher assures quicker work, better work and a greater saving of grain.

Other thresher sizes, 28-48, 36-60.

WITH this individual, or "community" outfit you are ready to go into the field when you want to; it will handle the threshing steadily, thoroughly, and quickly without the bother of a crew, and, more than that *it saves all the grain.*

The Twin City Thresher keeps six teams busy, it cannot choke or slug, and it delivers the full crop of grain cleaned, weighed, and tallied, ready for the bin or flour mill.

With the crops stored and the fields clear, Twin City farmers are ready with the dependable power of their "12-20" tractor for the fall plowing—for the success of another season.

And the Twin City "team of steel" will give the same service year after year, because they are built for lifetime service.

Special Features of The Twin City 12-20 Tractor

Sixteen-valve-in-head Engine means quick clearance, and complete combustion of kerosene fuel.

Removable cylinder head means easy accessibility for adjustment.

Likewise, the entire clutch mechanism can be reached by simply sliding the engine a few inches ahead on its cradle.

Removable Cylinder Walls—no re-boring ever necessary.

Crankshaft counterbalanced to decrease vibration, which gives longer life.

Crankshaft drilled for force-feed oiling means perfect lubrication.

Transmission direct on both forward speeds and mounted on Hyatt Roller Bearings.

Gears drop-forged, steel cut, heat treated, running in dust-proof oil bath.

The Twin City 12-20 won six out of eight plowing contests in which it was entered—against the best in the tractor field. Other tractor sizes, 16-30, 25-45, 40-65, 60-90.

Write for the facts about the Twin City Line.

TWIN CITY COMPANY, Minneapolis, U. S. A.

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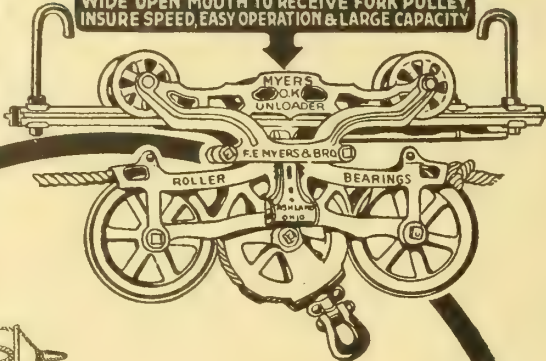
TWIN CITY

12-20 Kerosene Tractor with 16-valve engine

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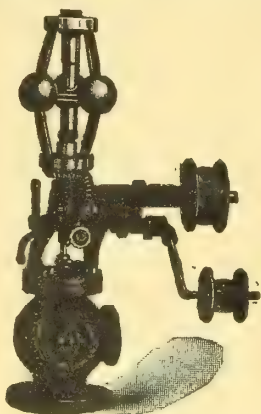
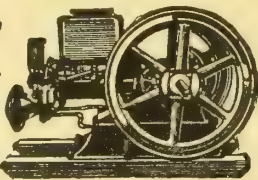
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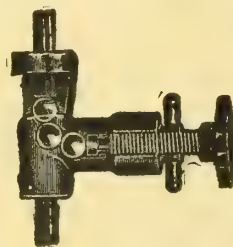
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Listen To Me

BY BUCK M'KINNEY

THE good book says "love ye one another," but it also expects you to use good judgment and not try and cover too much territory.

IT'S better to wear a grin on your face than a grimace. We have heard of court fools, but no one ever heard of a court grouch.

SHOW me a man who imagines everyone has it in for him, and I'll show you one who has it in for everyone. Having it in for everyone is the cause of it.

AN Italian immigrant, landing at New York, was asked by the immigration board what the Allies fought for in the Big War. His reply was "America fight for de democ, but Woody de Wils he gumma de Card."

WHEN Grandmaw Burleson leaves the cabinet it will help considerable to reduce the high cost of living. As a business depressor he is in a class by himself.

BILL HOHENZOLLERN is being entertained by a large bunch of Dutch guards. The German revolution now going on full blast tends to cause the Dutch to think that maybe they might come over and get the devil's side partner and put him back on the throne again. Willie has the same chance to get away that the proverbial snowball had in hell.

THIS is one grand and glorious country of ours and we are going to keep it that way. In case you feel inclined to start something tending to disturb the peaceful and even tenor of things, we would advise you to consult Emma Goldman and a few others who were given a fine boat ride to Russia with a one way ticket on the "Red Ark." Disturbers will find free passage and boats leaving on schedule.

CLEOPATRA fed Antony the "bull" and he fell for it, and the outcome was Tony lost his job, his Jane, and the whole works. Delilah fed it to Sampson and he took the cork under and the consequences were that Sammy lost his eyesight and even though he did a job of house-wrecking on the temple, the fact still remains the only real job Sammy ever could have held down again was with a hand organ and a tin cup on a street corner. Beware of the Bull.

SHE was some war while she lasted. We went some while we were going and, brother, we are going some more till we have paid up, but any time any country doesn't like it, we can get up and go some more. We are like the Irishman that got a snootful and went uninvited to a German dance and proceeded to raise the devil. He was ordered out but replied, "By gorrea, I didn't come here, and I ain't goin' away."

CONTENTMENT is the greatest asset in the science of living. If you are contented, not much else matters. A contented family is sure one grand sight. You can feel the soothing atmosphere wherever you come in contact with it. Have you ever been placed where you felt uneasy and people got on your nerves? That is the spirit of unrest. It is just as easy to be contented as it is to be discontented. When you see a man who is striving to better his condition it is not a sign of discontent. He is trying to satisfy ambition, and ambition is one of the greatest assets this world has. If it were not for ambition we would be blanks. Any man can better himself; it is all with himself. Contentment comes through peaceful, logical plodding. If you are a laborer and become dissatisfied with your wage, going on a strike can't bring you contentment even if you win your strikes. Strikes are destructive to the general welfare. Strikes break down the friendly feeling there should be between employer and employee. If you are not satisfied with your present condition, why blame the people you work for? Does that help your peace of mind any or improve your condition? Do you know the best thing any man can do is to get by himself and put himself on trial, being himself the judge of the whys and wherefores of his case. If you will give yourself a fair trial, you will find the blame attached to your own self. Changing from one thing to another does not necessarily mean discontent. You may be looking for the things that brings you contentment. We are apt to forget our happiness through envy of the other fellow. He got where he is through plodding. Saying mean things about him and trying to tear down the fruits of his labor won't bring you where he is nor get you your heart's desire. You may not be satisfied with your present condition, but you can be contented until such time as you can improve and the only way you can do it is by being absolutely on the square and playing the game fair.

Your Rail-less Railroad

YOUR live stock and the produce from your fields, carried in freight trains to the cities, thunder past countless danger-signs with the warning, "Look Out for the Cars!" Each one of these marks the crossing-place of a country road—a road without rails, leading to railroad and town. Each one marks a farmer's right-of-way.

Since your farm is a 1920 enterprise, probably it is fitted with most of the following modern equipment—the telephone, good lighting and heating, a silo, a manure spreader, a cream separator, an automobile, an engine, a tractor.

But have your hauling problems found their proper solution? Are the time-losses and difficulties of a decade ago still impeding your endless carrying of farm loads?

Government statistics show that in 1918

alone, 350,000,000 tons of farm products were transported to local shipping centers in motor trucks. The same national figures prove also that American farmers are the greatest users, among all industries, of these efficient money-saving hauling units. No progressive farmer can afford to overlook impressive facts like these.

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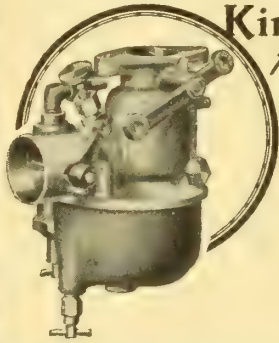
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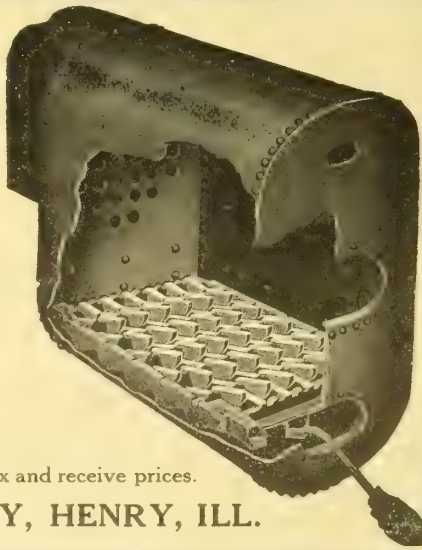
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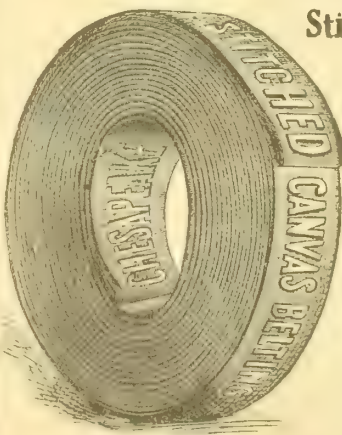
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Women's Department

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Want long distance to the stars.

That you, Mars? Why, howdodo?
How's the weather using you?
Feeling pretty fit today?
How's thing in the Milky Way?
How's the fishing? Bully! Fine!
Caught a squidgeon weighing nine?
Don't know what a squidgeon is,
But it sounds like A-I biz.
Say, old man, from where you be,
Staring right square down on me,
How do you think I'm looking—eh?
Out o' sight? That's bully. Say,
You're a humorist all right.
Well, by jingo—bzz—bzz—bzitt!
Wire's busted—have to quit.

Hello, Central! Venus, yes!
Venus. V-e-n-u-s!

Howdy, Venus! Howdodo?
Wished I looked as sweet as you!
How's your mother? Oh, too bad!
Really? That was very sad.
Thought I'd ring to tell you that
I admired your new spring hat.
Yes, it's quite becoming—grand.
Not exactly what you'd planned?
Well, perhaps it's just as well.
If you looked a bit more swell,
Half the women on this sphere
Soon would die of envy, dear.
Is it on straight? Well, not quite.
But the tilt strikes a piquant air
With the marcel of your hair.
Tell me, does your new spring sack
Button up along the back,
Or is it—bzz—bzz—bzzutt!
Wires bust again? Oh, tutt!

Hello, Central! What's the bill?
Fourteen what? Not fourteen mill—
Fourteen million dollars? My!
Wire's busted—so am I!

—John. Kendrick Bangs

A "Feeling" for Music

MRS. JEAN N. BARRETT.

Dear old mother Goose, the patron saint of children's music! How much the children of our family owe to her jingles. I can very distinctly remember my father playing with us and trotting us to the

Happy the child whose lot is cast in a joyous musical atmosphere! There is thus implanted in his inner being a something which will help him to go through many trials with a brave heart and an unconquerable hope and faith that this is after all a good world.

We constantly hear mothers say, "No, my children have no talent for music and I shall not bother to have them learn anything about it."

If I could feel that I had in all my life made a few mothers, a few teachers, understand the difference between music as a performance and music as a life element, and thereby gained for a few children this power which more than any other stirs the vital forces by which we live, I should feel that my share of life's troubles were a small price to pay.

A like misapprehension in the domain of art would banish from home and school the beautiful pictures and art forms which awaken a love of all that wonderful world of beauty revealed to the seeing eye and the appreciative mind because, perforce, so very, very few children have any talent for drawing, painting or modeling.

One of the first steps in rousing a feeling for music is to lead a child to



Where Music Is Loved.

rhythm of "Ride a trot horse," "To Boston, to Boston, to buy a penny bun," and "Little bow-wow to the mill."

No child, thoroughly imbued with these rhymes, will have any trouble in comprehending three and four part rhythms, with their varied subdivisions and accents. How much more delightful to have all this rhythmic instinct grow up unconsciously from happy playtime than to have it left until a child is old enough to be conscious of his lack in this respect and has to go through exacting and tiresome drills to overcome it.

listen. How much stress is laid in our scheme of education upon teaching a child to observe, to see; how little upon teaching him to hear. The eye is made dominant in all things and we lose much enjoyment which a trained sense of hearing might bring us. God made the birds beautiful, but He also gave them songs, so tender, so thrilling that the very breath stops that we may listen, as we sit at twilight near the home of wood thrush or song sparrow.

To the open ear is not the gentle, silvery murmur of the brook as it calls through the forest as keen a delight as is its crystal shimmer in a

setting of green, when we have followed its call and found its home?

Let us not forget that the morning stars sang together, and that He who created them meant His children to hear their music in the melodies and harmonies of all His great creation.

The child brought up in the city hasn't the beautiful sounds of nature from which to get his first lessons in listening, but mother and kindergarten can make use of what they have. Even the scissors grinder and ragman help us out here. One of my little pupils, the daughter of musical parents, gained her first idea of imitating sounds correctly from a ragman's call. As we were having our lesson one day we heard this song come, I was going to say float in at the window, but the ragman's tones are rather too strenuous to be called floating tones: "Rags, rags, rags; any old rags or bott's." The tune can be written thus, Do si la sol sol sol do do, but no words can describe the quality of the tones. At once I imitated the theme and little Frances, to my great surprise, imitated me exactly, whereas before this she had hardly been able to get one single note correctly. His tune was unique and it appealed to her.

Lead the children to listen in every way you can think of. Tap on different substances, wood, glass, silver. You may find a lampshade that gives forth a definite musical pitch. Play tunes on tumblers, tuning them to musical pitches by varying the quantity of water in them and striking lightly with a silver knife or spoon. This device I found most useful in arousing interest in music in a boy who seemed to have no musical instinct whatever.

A writer says: "The greater part of children's time is spent in elaborate impersonation and make-believe, and the entire basis of their education is acquired through this directly assimilative faculty." This applies most forcibly to music and gives to those who have the care of children almost unlimited opportunity for developing musical expression.

A lullaby song at the child's bedside at night is a benediction beyond estimate.

Live in Your Child's World
BY HARRIET FRANCES CARPENTER

While visiting a school I overheard this dialogue between an unimaginative teacher and a small boy who was helping to remove some cobwebs from a cabinet in the classroom:

"Spider-webs are very beautiful, aren't they, Miss Andrews?"

"Hold the pan higher."

"All spiders aren't bad spiders; some spiders are good spiders, aren't they, Miss Andrews?"

"Watch what you are doing."

"I know a story about a spider. Miss Holmes told a story to her class about Robert Bruce and the spider—"

"When?" severely. The child hung his head. "If you loiter at her door again, I'll keep you in." A sullen look appeared on his face and the work was continued in silence. After he had left the room she turned to me and said: "That boy gets sulky spells. Oh, he likes nature work and stories, but I never could tell a story."

Upon my suggesting that stories stimulate the imagination, she held up her hands and with a look of horror declared: "Imagination! You don't have to stimulate children's imagination. The trouble is they have too much!"

She was unable to reconcile her adult mental attitude with a child's outlook.

A little girl, as she ran up and down the steps of a broad terrace surrounding a house in the country, kept saying to herself: "It's just like an old castle! It's just like an old castle!"

"Nellie," commanded her father, "don't do that! You'll fall."

"She is always falling," he explained to his hostess.

"Does she hurt herself?" asked the lady.

"No, but she might, she is so awkward. She gets worse all the time."

His little daughter manifested a lively imagination, but he did not understand how to make it of use in developing restraint and poise.

Live with children and one lives in a world of perpetual imagination. In no way can we more easily control the child's acts, form his habits, mould his thoughts, than along this avenue of approach to his mind. Re-proof may adroitly be given by a playful appeal to the fancy.

"Poor Patsey," murmured a father, shaking his head as his heedless little son, a sturdy boy of five, stumbled and fell repeatedly during a short ramble in a meadow. "Poor Patsey! One would think to look at him that he had nice bright eyes, but they are just beads."

The next day, running impetuously to meet me, this same little fellow stumbled over a stone, fell, and got up saying good-humouredly: "If Daddy was here he'd tell me I had beads for eyes." His heedlessness was soon corrected by this jest.

"The flowers are asking why Patsey doesn't take his feet off and leave them at home when he comes to see us," I suggested one day when he trampled my snowdrops.

"What do the flowers say now?" he whispered as he quickly removed the offending members from the bulb bed and looked wistfully into my face.

"They say, 'Thank you, Patsey,'" I replied. "If you keep your feet on the paths you may bring them



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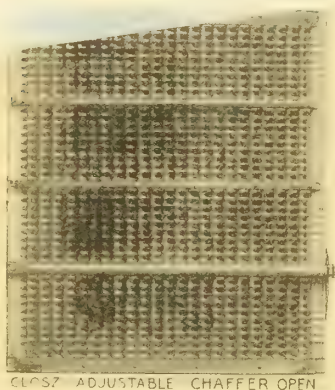
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with you when you come to the garden.' " And so a rebuke attained its end without creating antagonism.

Sometimes it happens that children lose the sense of discrimination between fact and fancy. Then we should clarify their ideas without implanting a sense of guilt.

It was discovered that a hitherto truthful child was beginning to make misstatements, evidently not for the purpose of deception, but entirely through confusion of thought. I had read him an account in a newspaper of a dog that put his paws on the steering wheel of an automobile, while his master, sitting beside him, changed the gears and saw to the essentials of running the car. He made no comment at the time but his imagination seized upon the idea. A couple of months later he told me that he had seen a dog running a car on Fifth Avenue.

"His master was with him," I responded.

"No, not that one; this dog was alone. He changed the gears himself."

Shortly afterward he wanted to know what a cocoon is. I began the allegory of the Caterpillar and the Butterfly. "Don't tell it that way—don't say 'it said' and 'he said'—just tell me," he broke in. So I told him the facts of the development of the chrysalis as briefly and definitely as possible. When I had finished, thinking this a fitting opportunity, I explained the difference between fact and fiction, telling him that we should let people know whether what we told was really so, or just a story or joke.

The following incident shows his manner of applying my careful definition. He told his aunt that he had seen two squirrels running toward each other on a branch of a tree. They had their mouths filled with nuts, and they ran so fast that they "bumped heads" and knocked the nuts out. After an effective pause he added: "That's a joke. I made it up! Now this is real—" and he repeated a simple incident of a squirrel carrying away the walnuts that he had laid on the ground to dry.

Some children naturally make the distinction between fact and fancy without assistance. One of my child companions usually explained his representations where they might not be obvious, so that we lived in a world of "pretend" without any feeling of deception—"I can't come to see you, I shall be too busy taking care of my horse (you know, my toy horse), and my automobile (you know, my bicycle)."

"Ride over on your horse."

"Oh, he is too wild."

"Then come in your car."

"It costs too much for gas and water."

Tried and Found True

(The Editor of the Woman's Department has tried all the recipes printed below, in her own kitchen, and found them "true.")

BUTTER COOKIES

Cream together one cup butter and one and one-half cups light brown sugar. Then add one teaspoonful of vanilla and one beaten egg. Slowly stir in two cups of flour. Mould lightly with the hand. Take out a small portion of the dough each time. Roll as thin as a silver dollar and cut with a small cutter. Bake in a moderate oven till a golden brown. This will make one and a quarter pounds of rich, crisp cookies.

CHEESE PIE

One-fourth cup butter melted, one pint of cheese, one-half cup sugar, one-half cup cream, beaten stiff, three eggs, vanilla flavoring to taste. Press the cheese dry and rub it through a colander, mix it with the melted butter, add the beaten cream, sugar, eggs and flavoring, stir well and bake in plain pie crust until a golden brown.

WHITE CAKE

One cup fine crushed sugar, sifted, one-half cup butter, one-half cup sweet milk, one teaspoonful baking powder, one-half teaspoonful peach or orange extract, two cups flour, beaten whites of three eggs added last. Bake very slowly about forty or forty-five minutes. When it leaves the edges of the pan it is usually done.

GOLD CAKE

With the yolks left from above cake, with perhaps one more added, beat one cup sugar, one-half cup butter, one-half cup sweet milk, one spoon soda and two of cream of tartar sifted with two scant cups flour. Bake slowly in loaf. Flavor to taste.

THERE'S A REASON

"He used to dance with Annie.

She waltzed with fairy grace;

He used to drive with Fannie,

She had such a pretty face:

He used to call on Clara,

She always praised his book;

But he finally married Mary

For she knew how to cook."

WAFER ICING

The most successful and most quickly prepared icing I find to be one white of egg beaten to stiff froth, then add one cup powdered sugar stirred in thoroughly but not beaten. Flavor with bitter almond one-half teaspoonful, or any preferred extract. (To vary the above, or when an egg-white is not at hand, try sweet cream to moisten the powdered sugar or any fruit juice.—Ed.)

CHOCOLATE LOAF CAKE

Three eggs, two cups sugar, one-half cup butter, one-half cup sour milk or sour buttermilk, two and

one-half cups flour, one teaspoonful of soda, one-fourth cake of unsweetened chocolate grated and dissolved in one-half cup of boiling water. Bake immediately after adding water so it will not have a chance to cool. Always add soda and chocolate last thing. This makes two ordinary loaves and will keep a long time. With age it acquires a reddish color which is very pleasing.

CHOCOLATE PIE

One small cup of sugar, one coffee cup of milk, three tablespoons of grated bitter chocolate. Let come to a boil. Beat the yolks of two eggs light, add three tablespoonfuls of cornstarch and blend with a little milk. Pour into boiling mixture and cook to a thick custard. When cold flavor with one teaspoonful of vanilla and put in a shell crust previously prepared. Beat whites of eggs until stiff. Whip in three tablespoonfuls of granulated sugar and pile on top of pie. Set in a hot oven to brown. This is delicious.

EGG SALAD

Boil eggs for half an hour. To one dozen hard boiled eggs take a box of boneless sardines, cut the eggs in halves and take out the yolks, skin the sardines and mash them with the yolks until smooth, add the juice of two lemons, salt and pepper to taste, stuff the whites, rounding up neatly.

Lubrication of Tractors

It is the practice of some tractor dealers who are local agents for tractors to recommend some one certain brand of oil.

This leads the tractor purchaser to believe that unless this one certain brand of oil is used that they will not be responsible for anything that happens to the tractor through faulty lubrication.

The majority of tractor manufacturers are not confining their recommendations of oil to such narrow limits and, as a rule, are willing to list and recommend any high grade oil that will meet the tests they think advisable.

Tractor dealers are sometimes influenced by an oil company to impress upon tractor users the importance of a certain brand of oil and, of course, this dealer does it mainly for profit.

This representation is fraudulent and the farmer should be given the understanding that a particular tractor can be lubricated with other than the particular brand of oil specified by the dealer.

Early in the automobile industry the same thing was tried, but the practice has been done away with, as the dealers realized that it was a deception and would only reflect upon the integrity of the company making such representations.

Where a dealer does exploit a particular brand of lubricant, the owners



When You Start Out This Season, Start Right!

THE 1920 THRESHING SEASON is right at hand, Mr. Thresherman. The day will soon come when you will take to the road, ready to start through a heavy season's work. You've been getting ready for this day! You know it pays to give attention to every detail of your rig, because time lost in the field can never be regained.

When you start out this season, *start right!* There's one thing especially that you should do—pull off the old "covered" drive pulley from your separator and replace it with Rockwood, *The Drive Pulley*.

If you do this, you will go through the entire season—and many seasons to come—with ample belt power for the heaviest straw, and with absolutely no pulley trouble—no stripped "covers," no ruined belting, no shut-downs, no pulley repairs or delays. Just think what that means!

Write today for free descriptive booklet, giving prices, sizes and full information about Rockwood, *The Drive Pulley*.

THE ROCKWOOD MFG. CO. - 1926 English Ave., INDIANAPOLIS



[Section removed to show construction]
ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and WEARS.
Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

All the Power—All the Time

ROCKWOOD, PULLEY SERVICE

Mention The American Thresherman and Farm Power

of tractors should write to the tractor manufacturer direct or to some reputable oil company direct and get absolute proof as to whether or not the claim made by the dealer was true.

Dealers of the class mentioned who do actually recommend one certain brand of oil are standing in their own light and doing both themselves and the buyer an injustice. There are those who may hesitate to buy a tractor whose successful operation is dependent upon one lubricant.

Motor Power Helps the Wives

"All modern improvements" is a phrase no longer confined to city apartments. Any farm with its various buildings may enjoy the privileges of indirect drop-lights, shaded bed-side lamps, and more practical benefits, such as electric washing machines, electric irons and

vacuum sweepers. The various companies who have been pioneers in introducing and perfecting the complete power plants now available to farmers, deserve a strong vote of thanks from the housewives of the rural districts. Surely, work for the "better halves" has been reduced one-half since the electric washer, iron and carpet-sweeper have come to the farm.

One of the companies deserving notice along this line is the Kohler Company of Kohler, Wisconsin. Lately we received information about their complete power plant for the farm. Its compact arrangement and easy installation will recommend it to many farmers who are debating whether or not to wait for old age to creep on ere taking advantage of the doctrine of "Let Electricity Do It." The Kohler engine is valve-in-head, and its igni-

tion is furnished by the Eisemann magneto. It is worthy of investigation by our readers.

Tractor Tests in Belgium

H. F. Henke, foreign traveling expert of the Advance-Rumely Thresher Company, has just returned from Belgium and Holland where tractor demonstrations were held. Mr. Henke demonstrated the 12-20 OilPull in sixteen demonstrations in Belgium, one being held on King Albert's farm near Antwerp. Another was held near the famous fortress of Liege. At the Belgium demonstration, held at Terlamont and which was the largest, there were eighteen tractors entered—fourteen American, two English, one French and one Italian.

An axle a trifle out of true will ruin a tire by subjecting it to grinding.

Uncle Silas

WHEN baiting your hook, did you ever stop to think how you'd like to be the worm?

IT'S not always the shortcomings, but often the "long goings" that shorten up the eccentric in life's journey.

BANKS are institutions where they keep money to loan if you don't need it, and where they prefer keeping it if you do need it.

A GREAT many failures in life are due to too much scattering. Business energy is like a manure spreader, you can't expect to jump from the Statute of Liberty to the Golden Gate without stopping to feed and water enroute.

WHEN your boy hunts rabbits when he should be in school, and in order to get by with it you certify over your own signature that he was sick at home, don't beat him up the first time he comes home at one A. M. and tells you he was at the Y. M. C. A.

AND then, my good sister, when you get kicked out of church for dancing, and you hear the saints who used the kicker indulging in the scandals of the village, like a hog rooting up to its ears in a manure pile, rejoice and be exceeding glad, for they also gossip one about the other, in the same old way.

WE'VE been condemned so often and assigned to the "soul toaster" so much, that I'm getting used to it, Ezra. When we get to hell, if we're routed thither, the greatest trouble will be to get a smell at the fire, for the "saints" and "make believes" generally have the front seats all reserved, you know.

THIS is a grand and glorious old world of ours and if you can't see the good things in it your eyesight is on the bum. It doesn't make any difference what your difficulty is, it could be a lot worse. If you don't think so just imagine what it would be if you had the seven year itch and was paralyzed in both arms at the same time. Keep on the sunny side of the street.

GOOD roads are a blessing to every one. Of course, the tractors and the trucks cut up the roads, so do automobiles. Tires wear out, and we buy new ones. Gasoline burns up, and we buy more. Then why bellyache about repairing the roads when they get cut up. What else can you expect? The good roads objector is an unreasonable whiner and should be sentenced to use ox teams all his life.

BE sure that thy ways are the ways of wisdom, when thou purreth with woman, and she will follow thee, thy shadow no less faithful. In Ethiopia the garlands will be hung, and the damsels of Assyria will call thee a "pippin." From the Land of Nod they will send the couch cushions and photographs, and perfumed letters, and from all parts of the earth they will sing of thee, and tell of thy great deeds, but change thy manner of flirtation, for all women like variety.

THESE crazy loons of theorists are driving us from drink to dry.

IT is easier to win some maidens with a quarrel than by flattery.

IF you try to be honest in business you are a crook; if you stuff the ballot-box in your dealings you are a pippin.

AS an earnest admonition from an old timer, don't allow yourself to get tangled up with those endless-chain prayers by correspondence, Ezra.

WHEN diggin' potatoes, always remember that it's the blossom that grows on top, and the 'tater in the ground, so don't be afraid to dig, Ezra.

THE way to keep society well cleaned is to put on plenty of steam to shake the sieves and blow out the chaff, leaving the good grain without any rat-manure in it.

DESPISE not the time when thee worked for a dollar a day, for now a pair of shoes represents four and twenty bones when built by those with a reputation for soaking you.

IT isn't always that "stained glass," soft-music, everybody-kneeling attitude that furnishes the combination to the time-lock on the door "up yonder."

THERE'S lots in the way in which you say things—like the old lady explaining the wonderful help she had received from taking "Scott's Expulsion."

THESE little corrugated wrinkles in the washboard will stand considerable usage, 'Liza. Don't be afraid to massage the laundry on them until the water looks clear.

THE only true fish story, according to Anna Carlson, is taken from Holy Writ, wherein the disciples said, "Lord, we have fished all night and caught nothing."

TAKE heed, Ezra, in thy disputes with beautiful women, that thou art in the wrong, that thou mayest acknowledge it, for all women enjoy homage.

IF a damsel loves another, thou wilt find it hard sledding to change her mind, or turn her from him whom she considereth some pumpkins. Therefore eschew competition.

AS you canter on down the long lane of life, sorter keep this fact in mind, that an automobile appetite can't be catered to on a wheelbarrow salary.

A preacher who jumps from the beginning of man to the flood, and from Mount Ararat to Pike's Peak, all in one sermon, should shorten up the eccentric of thought to less piston travel.

CHARITY covereth a multitude of sins, and hickory-bark and sorgum still bring war prices as maple syrup.

SPEAK not ill of thy brother if he voteth a different ticket from thy political leaning, but ascertain rather from him how much he receiveth for his franchise.

THE advertiser who insists on having the proofs of circulation certified only in his way is the simplest simpleton of the whole bunch, and the easiest to swallow a baited hook clear down to his lumbard joint.

IM going to be tolerable busy for a spell, during which time I will be minister plenipotentiary and envoy extraordinary to Lake Waubesa for the "ensuing season" of blue-gills and night-crawlers.

THE days of "nigger dogs," slave pens and auction blocks are over, but that doesn't make much difference to the colored brother who has not learned much excepting "Little Annie" and "Big Joe" or "seben-come-leven" in the world of usefulness.

THIS business of repeating scandal about some one is fierce. If you have it "in" for somebody and haven't brains enough to hold your own with him and nothing else in the world will satisfy you but revenge, just simply walk right up to him and crack him one on the nose. Bad as it is, it is far more honorable than sticking a knife in his back. Better yet, stick out your "paw" to him and say to him, "Let's get together." You don't know how good you'll feel afterwards.

JORDAN is a hard road to travel and when a fellow slips it looks as though the track was greased, because it is so easy to slide when you start down the "chute." You can hit the bottom in a very short while but after you have taken stock of yourself and start back you will find it a long, long road with great big rocks to block your path. You go down with music and laughter and carefree companions but you come back alone, with heart sobs, misery and despair, and it seems as though you would never reach the top. Keep up on the level, it is not worth the price the other way.

IKNEW a man who had piled up a goodly amount of this world's goods and who got so "tight" that he would not laugh, because of the wear and tear on his mouth. He had the whole family looking like paid mourners at a wake. But he died and after his death the "dough" he had been so miserable over was split up among his children. They have been eating regular grub and wearing good clothes ever since and have learned to smile and are so busy having a good time that they have long since forgotten to put a flower on old "kill-joy's" grave. He missed the big thing in life. You know, you don't have to be a spend-thrift, but as Lew Ellis told Gene Heath when Gene kicked Lew just south of the woodshed for having a "snootful," "Use judgment and they'll be sorry when you 'drive on.'"



*A Goodrich "Summit Thresher" Belt at work
in the harvest season*

Stretch-Proof Weather-Proof Built Without Splice

AND at approximately the same price as a canvas belt! Surely, here in the Goodrich "Summit Thresher" Belt, is a wonderful opportunity for the farmer to widen his power of production and his margin of gain.

"SUMMIT THRESHER"

First, can't come apart at a splice—because it has no splice. It is manufactured endless by our own process.

Second, protective layers of rubber prevent rain, dampness and snow from reaching the stout fabric body.

Third, a friction surface gives a firm grip on the pulleys preventing slipping and power loss.

Having advantages not found in a canvas belt and costing approximately no more, "Summit Thresher" is by all the laws of mathematics a more economic belt. It must last longer—that is certain. Let our experts show you why in detail. Simply write.

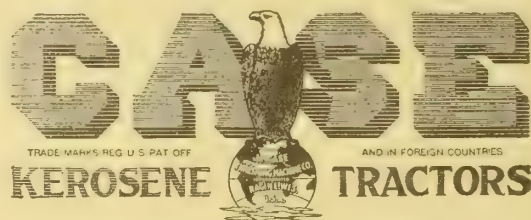
"Summit Thresher" serves just as well on ensilage cutter, power saw, feed grinder, pulverizer, corn shredder and sheller as on thresher.

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

Goodrich Thresher Belts



Best in the Long Run



Look for the Eagle, Our Trade Mark

The Power Harvest

IN just the same degree that you are equipped with ample, tireless power for harvesting,—in just that same degree do you conserve time, labor,—and in most cases, the crop itself.

Prepare for harvesting your grain crop this year with the Case Kerosene Tractor. Wait until the crop is ripe. You can afford to. Prevent grain being shrivelled by cutting too early, or being lost by cutting too late.

When the grain is just right, line up your binders behind a Case Kerosene Tractor and “go to it!” Great acreage, long hours and continuous power are built into the Case Kerosene Tractor, ready to serve you in harvest and in the work that follows harvest; on around the year, through every season, to harvest-time again!

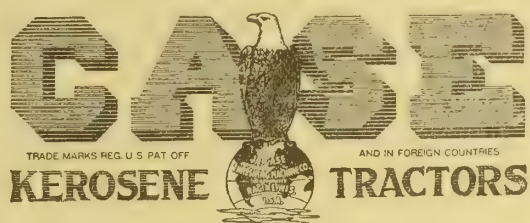
Write for books showing Case Kerosene Tractors working in every month of the year on farms just like yours.

J. I. CASE THRESHING MACHINE CO., Inc.

Dept. DJ-5, Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842





Look for the Eagle, Our Trade Mark

The Harvest Power

NOTE the convenience and saving of man-power by the use of the extension control on the Case Kerosene Tractor. This is characteristic of its remarkable adaptability. Simple as driving a team of horses—and more profitable.

Now for reliability. You can place implicit reliance in the Case Kerosene Tractor. Rugged strength for heavy duty; easy access to all parts for possible adjustment or inspection, such as clutch, magneto, timing gears, governor, water pump, etc.

The simplicity of design of the Case Kerosene Tractor is the best assurance of uninterrupted service. Its powerful, 4-cylinder motor is mounted cross-wise on the frame. This permits using spur gears throughout—the simplest tractor transmission. All gears are cut steel and run in oil-tight, dust-proof housings.

Case Kerosene Tractors, in standardized design, are built in 10-18, 15-27 and 22-40 h. p. sizes. Catalogs free on request.

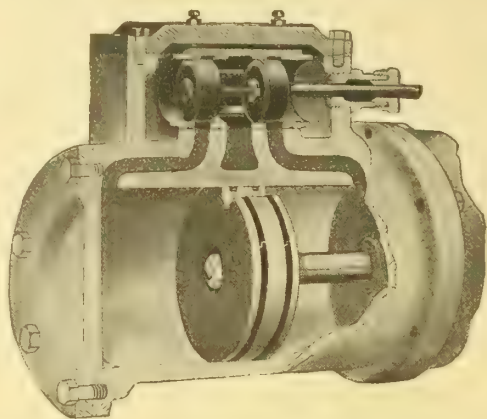
J. I. CASE THRESHING MACHINE CO., Inc.

Dept. DJ-5, Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.





More Power

Less Coal

Put in a Baker Balanced Piston Valve

Make your engine pull 10-30 per cent
more load or use 10-30 per cent less fuel.

Get away from friction—saves you 50%
on cylinder oil.

Special Discount for month of May

Write for particulars or send \$10.00 to hold the
low May price and order NOW.

BAKER VALVE COMPANY
28th St. and Cedar Ave.
MINNEAPOLIS MINN.



Vapor Tight Piston Rings
for steam, oil or gas
make tight cylinders.

Mention The American Thresherman and Farm Power

Do You Want High Quality



At a very moderate
price? Then
get a

BUTLER TANK

The Butler Company
Butler, Indiana

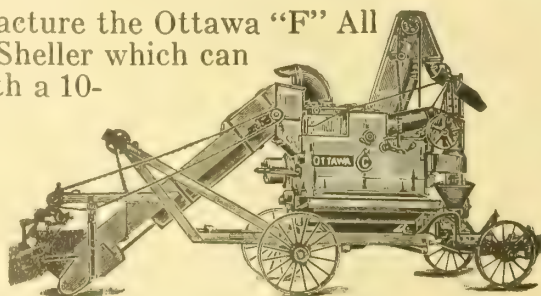
Mention The American Thresherman and Farm Power

Ottawa Cylinder Corn Shellers

The OTTAWA gets all the corn no matter
how soft, dirty or rotten

We also manufacture the Ottawa "F" All
Steel Cylinder Sheller which can
be operated with a 10-
horse gas engine.

Write for
Catalog



KING & HAMILTON COMPANY OTTAWA, ILLINOIS
Branch Houses: Council Bluffs, Ia., Sioux Falls, S. D.

Principles of Improvement of Common Crops

BY FLOYD BRUCE.

MODERN cultivated crops are very unlike the wild plants from which they came. They have been brought to their present high states of usefulness by years of intelligent selection along the desired line, and it is only by keeping up this selection that modern growers can maintain the yields and thus the farm profits. Intelligent seed and plant selection should be practiced not so much because it is an interesting thing to do, but because it is profitable—it will pay in money. Crop yields can be kept up only by using the best seed.

In general, plants are the product of two forces, heredity and environment. Heredity is the tendency to grow and act in a certain way that has been inherited from former generations; for that "like begets like" is one of the oldest of breeding laws. After the crops are in the field, the forces of heredity are acting to shape the crop that is to come.

One of the most encouraging examples of what can be done in plant breeding is the experience in Kansas with Kanred wheat. The average of all hard wheat variety tests in Kansas last year gave Kanred an increase of 3 to 4 bushels an acre over Turkey or Kharkof. This is the same as the average for the last eight years.

"Kanred wheat is not the result of a haphazard discovery, but of carefully checked development," says Ralph Kenney of the Kansas Experiment station. "It is the product of a single head selected in 1906 from a hard winter variety introduced into this country from Russia by the United States Department of Agriculture. It was discovered by selecting a large number of heads from a field, planting the seed of each in a row, harvesting them separately and studying each carefully as to hardness, earliness, yield and other qualities.

"The first year 554 selections were made and 451 of these were harvested. The second year each selection, or strain as it is called, was sown again in rows by itself. This process was continued several years, careful studies of each individual strain being made. Beginning in 1914, several of these strains including Kanred, were grown at the branch experiment stations at Hays, Colby, Garden City and Tribune, Kan.

"Comparative results have been obtained readily by farmers who

have planted Kanred alongside the more commonly grown hard wheat varieties. In 1912 winter wheat at Manhattan, Kan., was injured severely in late winter and early spring by freezing. Exact figures for winter survival are not available but the yield for Kanred in that season was 19.2 bushels an acre, as compared to 11.9 bushels for Kharkof. Much of the difference is believed to be due to the greater hardiness of Kanred."

The results of this experiment are backed up by the experience of scores of Kanred wheat growers scattered over the hard wheat belt. Their reports show that Kanred wheat, almost without exception, does withstand hard winters better than other varieties.

The results obtained by more than 1,200 farmers have established the superiority of the newly developed Kanred wheat for the hard wheat belt. Careful checking by these farmers has demonstrated that the yield of Kanred wheat is from 3 to 5 bushels an acre more than Turkey and Kharkof, which are most commonly grown. Figured on the basis of the present prices that means \$6 to \$10 an acre more for the crop.

It is not necessary that a farmer should know all the complicated laws of plant breeding to get results in improving farm crops. Not at all. One of the most important things is to guard against sowing poor seed, and in doing this it is important that one should know of the quality of the seed before it is purchased. This can be determined if one buys only on sample, and sends a sample of this seed to his agricultural college before it is accepted. From the college he can learn of the purity of the seed, and just the percentage of that will grow. The seed laboratory of the United States Department of Agriculture at Washington, D. C., also will do this testing work free. In doing this, tell who has the sample for sale, the price and the year and place of growth.

In sowing seeds of grass and leguminous crops, it is important that one should guard against weed seeds. The amount of dock and plantain that is spread by clover is amazing, and this could all be prevented if the growers knew just what they were getting when they purchased the seeds. What makes this weed problem greater, with crops like clover, is that they are not cultivated, and

7 Per Cent Income without Work or Worry Is Offered for Farm Funds Wanted to Fi- nance the Growth of Wisconsin's Largest Gas and Electric Public Service Company

The readers of **The American Thresherman and Farm Power** have millions of dollars of surplus funds available for safe and profitable investment. To a very large extent, the American farmer, like the United States as a nation, has passed out of the borrowing class into the investing class. This, we believe, is particularly true of the class of farmers who read **The American Thresherman and Farm Power**.

Acting on this belief, we respectfully ask you to read this advertisement. We want to do business with you. We want a part of your surplus funds in our business. We offer you, for the use of such funds, a regular, dependable 7 per cent income, without work or worry on your part and with maximum safety for your investment.

Wisconsin Gas & Electric Company is the third largest electric service utility, and the largest combined gas and electric utility, in Wisconsin. It serves over 32,000 gas and electric customers in the cities, towns, villages and on the farms of eleven of the richest and most populous counties of Wisconsin—the region surrounding the Milwaukee metropolitan district. It is closely affiliated, under common ownership and management, with The Milwaukee Electric Railway & Light Company, which supplies the electric light, heat, power and traction services of the Milwaukee metropolitan district.

These Companies have financed most of their growth during recent years by selling their new securities, as authorized by the State, directly to Wisconsin people. They have today more than 7,000 satisfied Wisconsin investors, among them hundreds of prosperous farmers and dairymen. Because of their known strength and safety, these Companies have been able to raise millions of dollars of new capital, among their home people, at a lower rate than any other American public service companies. The region in which they serve as a basic industry is one of the richest in the United States. It has got rich gradually through the years by reason of its enterprise, industry and thrift. These are its characteristics.

Wisconsin Gas and Electric Company is now selling, direct to investors by mail or across its counters, **AT PAR FOR CASH**, two new issues:

\$500,000 of 7 per cent preferred stock
in \$100 shares.

\$500,000 of 5-year, 7 per cent Gold
Notes, in \$50, \$100, \$500 and \$1,000 sizes.

The preferred stock's 7 per cent yearly dividends are payable in quarterly installments—April 15, July 15, October 15 and January 15. This stock has preference both as to dividends and assets, and shares equally with the common stock all dividends paid over 10 per cent.

The notes mature March 1, 1925. Their 7 per cent interest is payable semi-annually—March 1 and September 1. Noteholders have the privilege, on any interest date to September 1, 1924, of exchanging the notes, at par, for shares of the 7 per cent participating preferred stock.

The principal business offices of the Company are in Racine, Milwaukee, Kenosha, Watertown, Whitewater, Burlington, Cudahy and South Milwaukee—all in Wisconsin.

Bank draft, certified check, postoffice or express money order should be sent with mail orders. Prompt delivery of certificates ordered will be made by registered mail. If you buy through your bank, the Company pays your banker one per cent commission for handling the business. Circular with full details of the Company's business, and of these issues, mailed on request. Address all orders or inquiries, and make all remittances payable to

Wisconsin Gas & Electric Company

Securities Department, Public
Service Building

Milwaukee

--

Wisconsin

"The Man Behind the Gun"

OWNERS say that "The Man Behind the Gun" in the Red River Special is one of the most progressive features ever built into a thresher. It's the device that helps **beat** out the grain—saves it from the stack and makes the man with a Red River Special always sure of giving his customer or giving himself a clean job of threshing.

Red River Special

Most threshers wait for the grain to drop out. The Red River Special **beats** it out and saves enough that others would lose to pay the thresh bill. The big cylinder throws grain and straw violently against "The Man Behind the Gun" and Beating Shakers keep tossing and beating the straw until the last kernel is saved. Farmers who hire their threshing done are looking for the man with a Red River Special Outfit. This means easier business and better pleased customers for you if you are doing custom work.

If interested in a thresher for individual use, ask about our "Junior" Red River Special.

Write for Circulars

Nichols & Shepard Co.

In Continuous Business Since 1848

Builders Exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines

Battle Creek, Mich.

thus the weeds are left unmo-
lested long enough to get a good
foothold. Some samples of grass
seed may seem almost pure, yet
there will be a small percentage
of mixture which is large enough
to do considerable harm; one sam-
ple tested recently was rated as
having only 1/5 of 1 per cent of
mixture, yet it contained 990 weed
seeds to the pound. Another sam-
ple contained 2.5 per cent of mix-
ture, or 27,600 weed seeds to the
pound. The average grower would
not have considered this an espe-
cially bad sample, yet if 15 pounds
to the acre of this seed had been
sown, 414,000 weed seeds would
have been distributed, all of which
would have an equal chance with
the crop.

A sample of seed may contain
several different things, the classes
usually being good seed of the
kind wanted; chaff, sticks and dirt;
dead seeds of the kind purchased;
weed seeds, and field seeds other
than those wanted. In this lot,
it is only the good seed that is
of any value; the remainder is
either useless or harmful. The
actual or net value is what a farmer
ought to know in buying seed,
and he can get this if he has a
specialist look it over for him.

A. J. Pieters, of the United
States Department of Agriculture,
in speaking of the seed business,
said that "too often neither seller
nor buyer has a definite knowledge
of the real value of the seed. Seeds
are sold mostly by appearance,
and in many cases this method
proves satisfactory, but it often
fails. I recently purchased a sam-
ple of Crimson clover seed from
a seedsman. The seed was evi-
dently not fresh, but seemed to
be of fair quality. When tested,
however, only 10 per cent ger-
minated. Samples of beardless
brome grass that looked like good
seed were tested and found to
contain from 15 to 40 per cent
of a cheaper seed. Red clover is
sometimes adulterated with yellow
trefoil, and the average individual
cannot tell the difference. Seeds-
men are not infrequently deceived
and sell seeds without knowing
them to be poor. Perhaps no
class of merchants know less about
the quality of the goods they
handle than do the small seed
dealers.

"They know the more common
seeds, and can tell whether clover
seed is clean or very dirty, but
beyond that their knowledge does
not extend. They buy their stock
under a certain name and sell it
as such. Recently a package of
Orchard grass seed was bought
from a Western dealer and it was
found to contain no orchard grass
whatever, but only English rye
grass. It is probable that the

dealer did not know one from
other. The farmer who buys from
local dealers is, however, depen-
ent on the dealer for the qual-
ity of the seed, and it is he who suf-
fers if the seed proves to be inferi-
or. The dealer can readily say that
the seed was good, but that the
fault lay with the planting. This
may or may not be true; the only
way to know is to test the seed
before planting.

"As has been said, the remedy
lies with the consumer. All legi-
mate demands in trade are bound
to be met, and if purchasers want
intelligently and persistently to
demand good seeds they will get
them. When trying to get good
seeds four rules should be ob-
served: buy from reliable firms;
avoid the cheap grades; demand
a statement of quality in percent-
age and test the seed.

"Great care should be exer-
cised in drawing the samples for
testing, as the value of the test
depends largely on the exactness
with which this has been done.
We often get samples containing
about two thimblefuls of seed.
Such samples are worthless for
testing; the quantity should never
be less than 1 ounce of the smaller
seeds and 4 to 8 ounces of the
larger kinds. The sample must
fairly represent the entire bulk,
and to do this it must be drawn
from different parts of the mass.
When a bag of seed, especially
grass seed, has been sent some
distance and has been shaken up
by the jolting of the cars or the
farm wagon when being brought
from the freight depot to the barn,
the lighter seed and the chaff tend
to gather on top, while the heavier
seed settles to the bottom of the
bag. If a sample were taken from
the top of such a bag it would
not fairly represent the lot; neither
would one taken from the bottom.
To get a fair sample the seed should
be emptied upon a smooth floor
and thoroughly mixed with a shovel.
Small portions should then be taken
from different parts of the heap,
and these together make the sample.
In case the quantity of seed bought
is small it may be poured into a
pail or other receptacle and small
portions taken from time to time
as the seed is poured out. When
guaranteed seed is sent for test-
ing special care should be taken and
a disinterested witness be present
to sign the blanks that will be
forwarded from the station.

"It cannot be too emphatically
stated that the value of the test
depends largely upon the fidelity
with which the sample represents the
whole lot of seed. No claim for
damages could possibly be based on a
test if it could be shown that the
sample tested did not fairly represent
the lot. With a carefully drawn

ample however, the station should be able to report the exact value of the seed and expose any adulteration or other fraudulent practices. The purchaser can then decide for himself whether the seed from which the seed was bought is dealing fairly."

The experience of most good farmers has been that it pays to use a fanning mill in preparing grain for sowing. By its use, the scrub kernels may be eliminated, and the seed that remain will produce a higher yield than the whole lot of seed, taken just as it comes from the threshing machine. Weed seeds also may be removed by a fanning mill. A fanning mill acts on somewhat the same plan as a breeder of animals, in that the scrub kernels are removed from the ones to be used for breeding, and may be used for other purposes.

And in speaking of animal breeding it must be remembered that crop breeding has not progressed rapidly nor so far. The main things that delayed the breeding of plants after great progress had been made with farm animals was that the sex in plants was not well understood, and there was difficulty in controlling the pollen. And the control of pollen is one of the great problems of plant breeders even yet. Breeders of animals can tie up the male and thus keep him confined, but there is much trouble in keeping the utilization in plants under the direction of the man in charge. Plant breeders have the advantage however, in that they can work with far greater numbers.

There are great opportunities before the breeders of crops, who will take the pains to produce really superior seed. For example, with wheat there is an opportunity for a breeder in almost every section to grow superior yielding strains by selection, which will be adapted to the conditions of the community. Wheat is changed readily by a variation in soil and climate, so that a variety which will produce a high yield in one place may not keep this record elsewhere.

Breeders of soft wheat have an especially good opportunity, for there has not been so much progress made in producing pure, high-yielding races of soft wheat as there has been with hard wheat. The soft wheat field that does not contain at least 1 or 2 per cent of foreign types is rare indeed. This percentage tends to increase with the winter injury as a rule, so, for the bearded mixtures stand the winter better than the soft wheat.

The way to breed out undesirable types of wheat as a field proposi-

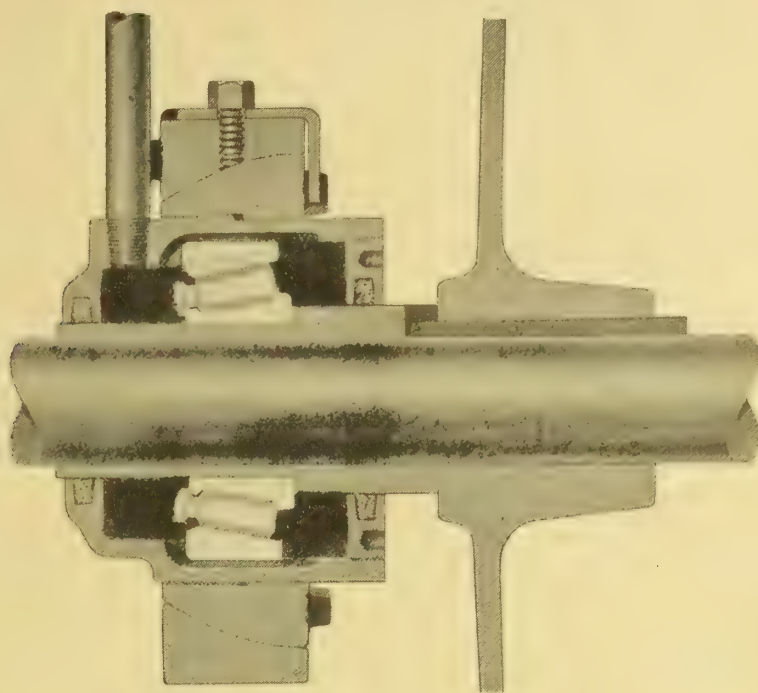
tion is this: go into your field in the summer, after the wheat is headed and before it is cut, and cull out all the foreign types you see. This is the best time to do this work, for the foreign heads easily may be found. Remove the foreign heads from enough of the field to make a good-sized seed patch, and eliminate them again the following year. It will not take long to get the seed practically free from mixture. This method is well adapted for use by the average farmer under average farm conditions; of course the

specialist can use methods that are more scientific.

With some of the smuts—take for example the stinking smut of wheat—the loss is not only the kernels which are destroyed, but also in a lowered quality of the whole crop, in many cases. Smutty wheat brings a lower price because it cannot be used for making flour until it is thoroughly washed and scoured. Wheat that is not too smutty can be cleaned at a nominal expense by mills that have the equipment, but many mills have not installed this machinery,

and they reject all smutty wheat.

The proper selection of seed is not a complicated problem—it is largely a matter of using common sense. One can count on getting crops that are similar to the seed of the ones that are sown, for "like produces like." Good farming demands good seed; for the most profitable production is not that which is based on the foundation of poor seed. The best farmers, the ones who are making the most money from their land, usually use the best seed they can get.



To Outlast the Separator

Timken Tapered Roller Bearings are engineered into grain separators with the same thorough-going care that marks their installation into the design of passenger car, truck, and tractor.

The journals provided have more than ample space for the lubricant, are adequately protected against entrance of dust, and are *self-aligning as a precaution against warping of timbers or distortion*

of metal supports. Adjustment to take up wear is easily made through threaded carrier. The mounting is extremely economical both as to initial cost and performance.

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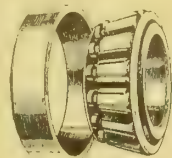
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Plants at Canton, Ohio; Columbus, Ohio. European Factories: Birmingham, Eng.; Paris, France. General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio



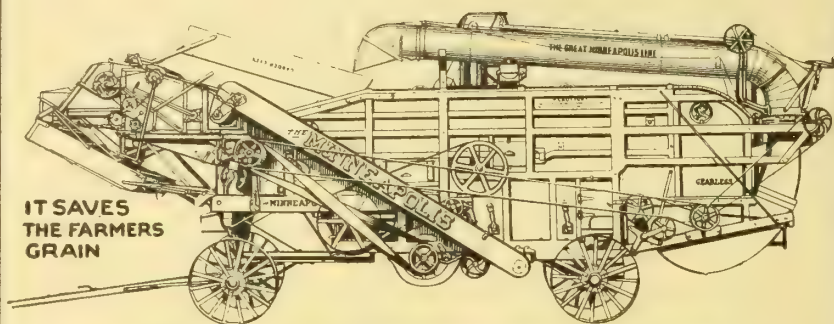
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The use of Timken Tapered Roller Bearings at points of hard service in the great majority of leading tractors—and in power-driven farm machinery—is proof of leadership established on the tapered principle of design, quality of manufacture, performance, and service to the automotive industry.

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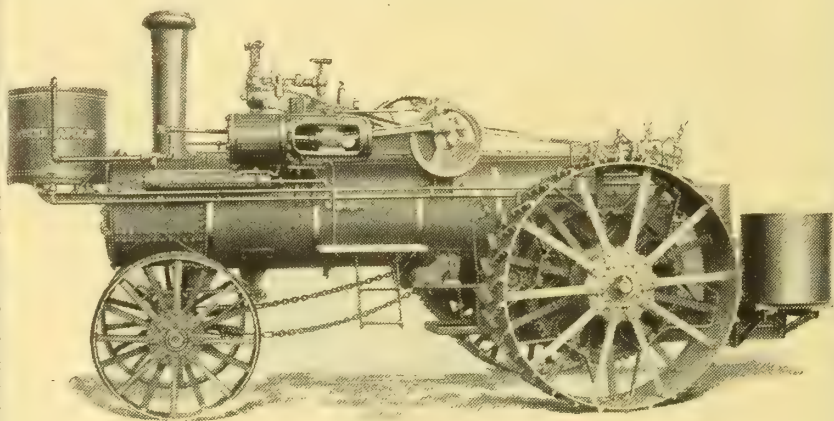
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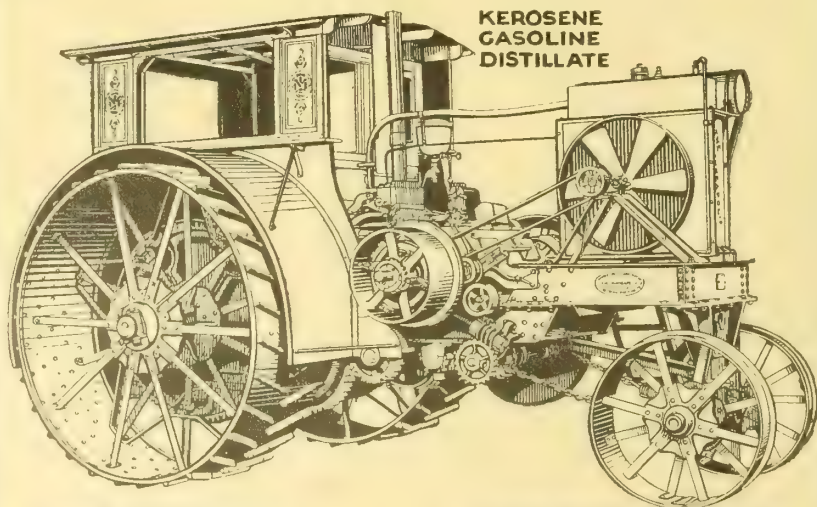
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Mention The American Thresherman and Farm Power

What He Least Expected

By HOLWORTHY HALL

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HOLLISTER was sure that Ballin's uncle would absolve him if he reneged. Ballin's uncle would have to. And Hollister could resign his silly mission, and stay in Bermuda with a clear conscience. Hadn't he been authorized to resign under stress?

"Partly, though?"

"Yes, but—Mr. Hollister, I wouldn't have come to you like this for my sake! It's for Ned, and Pete, and—Mr. Cloud. Please don't leave them! You must let them know now that you'll stay. They need you—they need you terribly. Can't you sacrifice something for them?"

Hollister took her hand—fraternally.

"Mrs. Cloud, I'd already planned to sail on the *Oceana*, but I'll stay on one condition—if you'll tell me what it is that makes you want me here, and what I can actually do if I stay. I've been living in the dark ever since I met you that night in New York. If you'll tell me what good I can do—"

"But—that's impossible!"

"Even if I should make that condition absolute?"

"I—it's impossible, Mr. Hollister."

"You mean you won't? Not even for Ned—and Pete—and Mr. Cloud?"

She was troubled beyond her power to conceal.

"No—because I can't!"

He released her. The aggravation of his recent impatience threatened to atrophy his susceptibilities; but before he spoke, he was again captive.

"You simply ask me—without rhyme or reason—to vegetate here instead of carrying out my plans to go home? And you simply say—very indefinitely—that it'll be a favor to Ned and Peter and Mr. Cloud?"

"Yes, Mr. Hollister."

He was increasingly brusque; but he had to neutralize her sweetness.

"Did you expect me to agree to that?"

"I—I don't know."

"Yet you were willing to compromise yourself by coming here to ask me?"

"I—I came, didn't I?"

Hollister was very sedate.

"Mrs. Cloud—my head's nothing but bash. I don't know what to think. I'm not going to try. I do want to help my friends. But—there are so many conflicting things. . . . Well, there's no use speculating. I'm groggy already. If I could be sure I'd please you, I wouldn't delay another minute. I'll stay, over on the understanding that it isn't for Ned, or Pete, or anybody else—except you."

"If you do stay—I don't care so much about your excuse to yourself—"

"But I want you to realize it. Do you?"

Ballin's cousin technically surrendered.

"I—well, yes."

"And to do it, I'm breaking a flat promise."

Even in her anxiety, she was provocative.

"A promise?"

"A promise I made to your brother-in-law this morning. He was a lot more excited and downright than you are, too. I promised him that I'd sail on the next boat, if I could get a berth—"

Ballin's cousin was aghast.

"You promised him to sail?"

"Yes. He assured me that that would be the kindest act I could do for you. And so I—"

He stopped, marveling at the expression in her eyes. "Mrs. Cloud!"

She regarded him steadily. Her face was very white.

"He—did!" she whispered.

"Oh, Mrs. Cloud! I'm sorry if I've upset you—but that's exactly what he did."

Her lips quivered, and Hollister's heart sank.

"And—now he's turned—I!" She retreated toward the door, both hands pressed against her breast.

"Mrs. Cloud! Won't you let me help you?" She fumbled for the knob. Hollister was ahead of her; he barred the passage, and made as though to take her in his

arms—but he quashed the motion in a nick of time. "Mrs. Cloud! I can't stand this! I want to be of the greatest service I can to you—if it'll help you, if it'll please you, I'll stay down here until Hades is frozen solid—if I can work it out to do. But don't look at me like that!"

The telephone rang feebly.

"I—I've thought I could rely on many people—"

"You can rely on me!"

"Haven't I?"

"And haven't I been what you've wanted me to be?"

The telephone bell rang smartly.

"Yes—oh, yes!—You'll have to answer that—"

With great effort, he kept his arms military inaction.

"Let it wait! If I do stay over, will you let me see you often? As I did before Ned came down? And tell me everything you can—and hear what I have to say?"

"Oh, yes—I want to! I will, really!"

"Then I'll do absolutely the best I can."

At that moment he recalled the injunction laid down by Ballin and Kirby. He remembered that after his resignation, he couldn't afford to pay his board-bill; since what ready money he had on hand had been advanced by Joshua W. Brown on account of expenses. Impotence fairly battered him into palsy. He looked on at Ballin's cousin; and she shrank, terrorized, against the wall. The telephone rang maddeningly. "Y—you'd better go, now," said Hollister, tempest-tossed. "Honest, you had!" He opened the door, and made way for her. "Wait!" He lifted her hand and touched it with his lips. "I'll try to stay for your sake," said Hollister. "If I can fix it up by hook or by crook, I'll do it!"

She was contemplating the hand he had kissed.

"Thank you—thank you ever and ever so much, Mr. Hollister—"

She had fled! The telephone rang four short, choleric spasms. Hollister took the receiver.

"Hello—yes—Cable Office?—What cable office?—Oh!—Yes, all right—Halifax and Bermudas Cable Company?—This is Mr. Hollister at the Hamilton—Can you talk a message and let me pay for it later?—I'm down about three—all right—Vos 160 Broadway, New York. I resign. Signed, Hollister—Correct—Good-by."

CHAPTER XIX

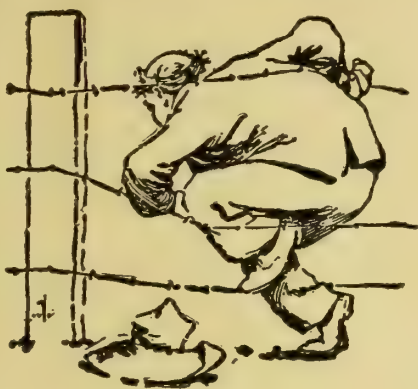
Life had developed such speed during the morning that Hollister, when he went down to lunch, was in the mood of an athlete in training. The past and the present were as nothing to him; the future was colossal. Eating had lost its pristine charm as an indoor sport; it was merely the stoking of fuel for the afternoon race. Hollister ate sparingly at a solitary table—he wasn't in the humor to join Ballin's party—and escaped to the veranda, the universal solace of good tobacco.

"This merry-go-round," he said to himself, as he exhaled the first voluminous clouds, "would make the late S. Holmes Esquire, turn in his grave." He achieved a soul-satisfying smoke ring. "More than that," he confirmed, "I'll bet it would make him spin!"

And, indeed, the alternating requests of Ballin's uncle and of his cousin were infinitely more stimulating to Hollister than the pabulum served up to him by the languid waiter. He tried to piece out a patchwork solution which would act as a sedative to his curiosity, but the effort was so futile that he presently defaulted, and went on to the consideration of minor details, such as the source of his income after his cabled resignation reached Joshua W. Brown in his mahogany sanctum in New York.

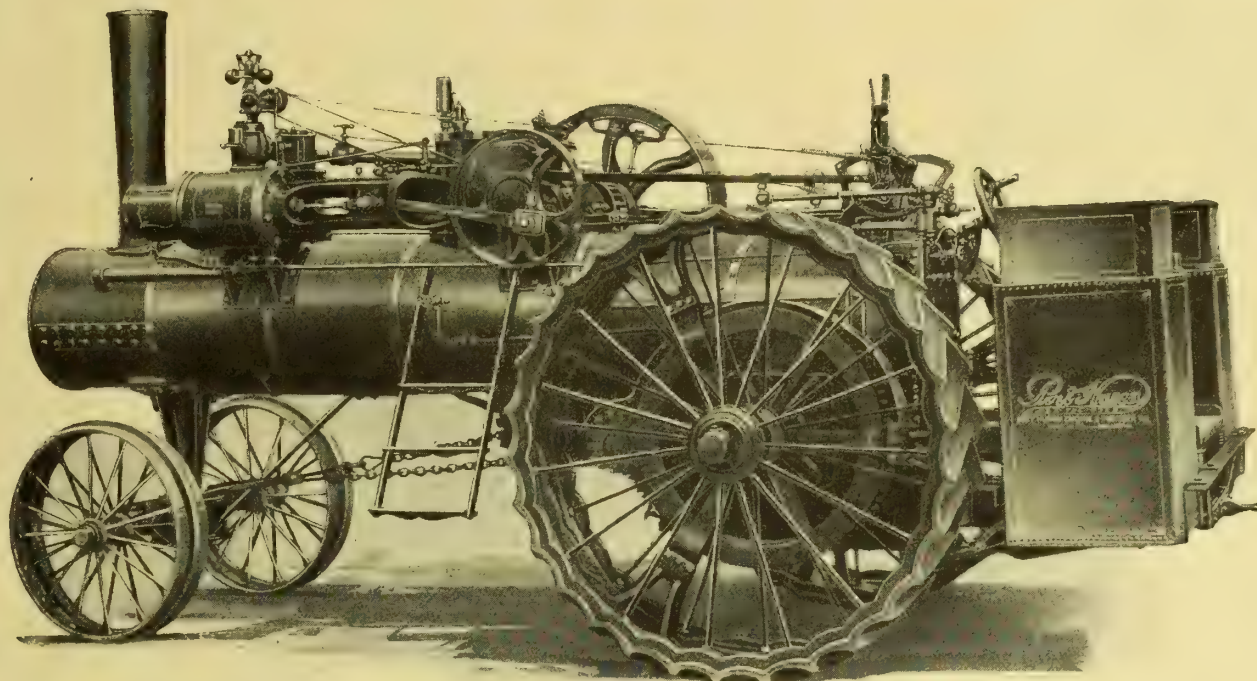
His brains were rapidly mellowing to a state of which over-ripeness would be a polite synonym, when a shadow fell diagonally across the veranda, and Mr. Hartwell's sonorous voice rang in his ear.

Points to Consider



*Points that Produce Economy—
Points that Eliminate Waste*

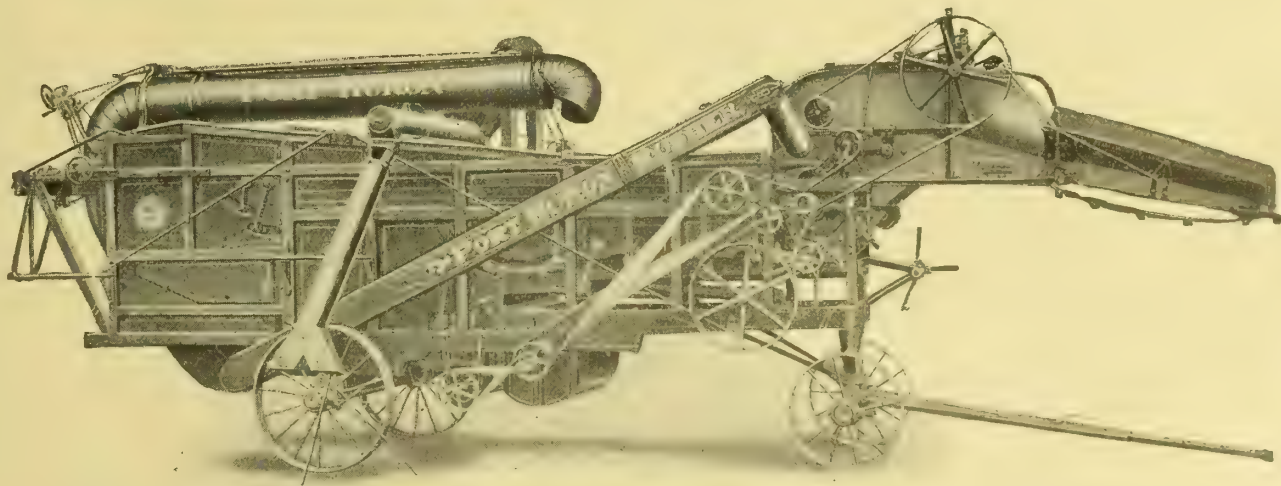
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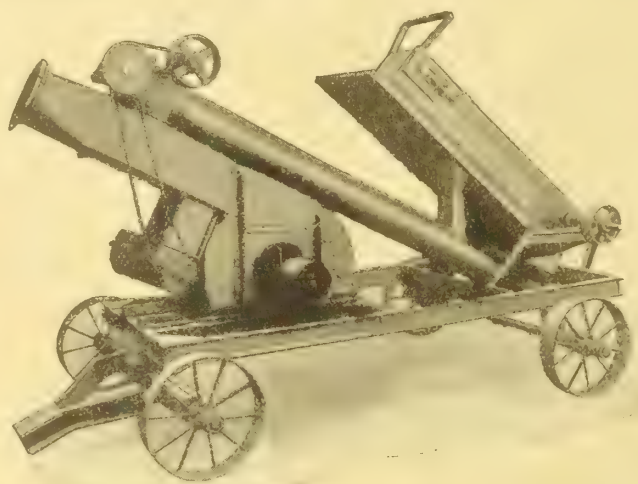
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"Well, young man—building castles in Spain?"

He looked up, and saw the lawyer and Miss Rexford side by side, smiling pleasantly at him.

"Why, yes," he conceded, rising. "Or at least in the Spanish Main."

Ballin and Kirby sauntered out from the cool depths of the lobby, waved cheerily at him, and took adjacent seats out of ear-shot.

"Are you a pretty good architect?" queried Hartwell, widening his smile.

"Not bad. But I'm a crank for hardware. It's a sort of hobby of mine. I specify combination locks for all the inside rooms."

Hartwell's smile flickered and went out; he bowed perfunctorily, turned his back and walked over to meet Ballin's cousin and Mr. Cloud, who were just emerging from the hotel. Miss Rexford, perched on the arm of a chair, surveyed Hollister under her lashes.

"I've been wondering if you've got neurasthenia," she said finally. "That does bring a loss of memory with it sometimes."

Hollister was impelled to chuckle.

"On the contrary, Miss Rexford,—I've got a memory like a tenpenny nail."

"Really? I thought you'd forgotten me."

"Never!" said Hollister, without guile.

"Never's a long, long time, isn't it?"

"Make it until the sands of the desert grow cold, then," said Hollister lightly. "Or the sun and the moon cease to shine, and the stars to endure. No extra charge for poetry."

"Speaking of sand—and moons, and things—" He knew what was coming.

"Yes?"

"When are we going to have another stroll together?" Their eyes met, and fenced a preliminary bout.

"Soon, I hope," said Hollister. "I've intended to go up to Fairyland again to hunt for something I dropped up there."

"Something valuable?"

"Not to me—but it had associations. The term is rather popular just now. A scrap of paper."

"Oh!" Miss Rexford was condolent.

"That's too bad. I'm afraid you'll have a hard time finding it, won't you? It's been so many days—and such a breeze—"

"Oh, I only wanted it for a souvenir."

"Of what, Mr. Hollister?"

"Of you," he said, lowering his voice.

"Of me? How extraordinary!"

"Not at all. I'm an inveterate collector of souvenirs—and that would have reminded me always of a very memorable evening."

Miss Rexford's manner was maiden shy; but her speech was that of a seasoned campaigner.

"There are plenty of evenings, Mr. Hollister."

"Surely. Plenty is just the word. It implies a certain richness, and fullness."

"You're good at riddles, aren't you?"

Hollister grinned, but made no reply; and Miss Rexford, after a generous pause, said: "This evening perhaps?"

"Perhaps," he temporized.

"I've a beautiful story for you—not a Ford story, either. You'll be crazy to hear it."

"But will I be if I do?"

Miss Rexford smiled, and slipped down from the chair-arm.

"You're to dine with us to-night, of course—we'll arrange it then; shall we?"

"As well then as any time," he said ambiguously. Twenty feet away he saw Ballin's cousin sending him a pressing message by wireless; he replied in the same fashion; and observed her, almost immediately, excuse herself to her four satellites, and disappear within the Hamilton. "Thunder!" said Hollister amiably. "I've left my watch up-stairs! May I bequeath you to the quartet over there for half a second?" He, too, went inside, loitered a moment as a precautionary measure, and took the elevator to the second floor.

As he had expected, Mrs. Cloud, deeply agitated, was waiting for him in the corridor. She squandered no time in preliminaries.

"Mr. Hollister!" she said huskily. "We've got to have another talk somewhere—and I don't know where! They won't let me out of their sight! They won't let me alone! I said you and I were cycling to Elba Beach—and they all said they'd go too! I can't get away from them! They won't even be snubbed. Ten minutes is enough—but it's got to be now!"

"What's the matter with the balcony?"

"No—Edith'll be up! They send her after me if I'm away two minutes!"

"Let's make a start right here. We can

go down the fire escape if we have to. What is it, Mrs. Cloud—more about Ned?"

"I want you to promise me—Listen! Above the loud purr of the hoisting machinery, Miss Rexford's laugh was distinctly audible. Ballin's cousin blanched.

"She's coming now! Mr. Hollister—"

"What's the difference? Let's go out—"

"No! Here! Hurry! Hurry!" She darted down the hallway, and flung open a door. Hollister, in a daze which was becoming habitual to him, followed stupidly. She closed the door ever so softly, and shot back an adequate bolt. Breathless they stood in suspense.

And then a tattoo sounded on the upper panel.

"Mrs. Cloud!"

Ballin's cousin shivered, and Hollister, with painstaking care, took her hand, and gave it a comforting pressure. She glanced at him, and colored.

"Oh, Mrs. Cloud! It's Edith!"

Hollister shivered now, and Ballin's cousin lent him courage.

"Humph!" There was a final rap and a bang; skirts swished and rustled; and there was quiet. Hollister drew a long breath, and Mrs. Cloud withdrew her hand. He was sorry to have it go.

"I told you so," she whispered. "It's been this way ever since Mr. Hartwell came! One of them's always after me. Wasn't it lucky this wasn't locked?"

"Mine never is, either. I suppose it's careless, but—We'd better pussyfoot out, hadn't we?"

"No—we must talk! It won't take ten minutes! Please! Peter just made a slip of the tongue that's worrying me dreadfully. I'm running all the risk—for the second time! You're not. Hush!"

Through the hallway rapid and heavy footfalls thundered and the noise of a tremendous scuffle, and incoherent words. Some one swore viciously. Some one cried out. There was a thud of a harder substance against a softer; a prolonged groan; a fall; and flying feet. Hollister leaped forward.

"Good God!" he said. "Somebody's hurt!"

The girl was clutching at him, but he disengaged the bolt, flung open the door, and stumbled over a prostrate figure which lay huddled in a heap almost on the threshold. At the same moment, he heard other doors swinging.

"Get back!" he said, thrusting Ballin's cousin away. "Get back! Lock it!"

Up the stairs bounded Ballin and a transient or two; down the long chute of the corridor appeared a man and a woman who suddenly broke into a run as they sensed the drama. Hollister, bending low, suddenly recognized the sharp features which still bore the marks of his badly placed uppercut.

"Phil!" gasped Ballin, seizing his coat.

"Where's Jim Hartwell?"

The lawyer, coming up behind him, spoke for himself.

"Here I am—what in hell's this?"

More men and women, and more, and more; running and crowding into the circle and drawing back in horror, and jostling ahead in their desire to see the horror more clearly.

"It's Diederick—Jim's law partner!"

Hollister straightened, and put his back to the nearest door.

"Well—"

Hartwell was on his knees.

"Get a doctor!" he snapped. "He's hit hard! Who did it? Get a doctor—beat it!"

Ballin grasped him by the sleeve.

"Jim—where were you?"

"I'd just gone into Hollister's room—waiting for him. Didn't I say I was going after him? Didn't I come out of it just now?" He glared at Hollister. "I hear the row and came out—"

"That's right!" corroborated some one in the circle. "He did! I saw him!"

Ballin's articulation was strangely impeded.

"Phil! Weren't you in your room? He says you weren't—but weren't you? Where were you, Phil?"

In his mind's eye Hollister could see a girl trembling on the other side of a thin partition. He could also see a little notebook, and a host of witnesses to an altercation in the hotel lobby. He could see that the truth was impossible; and that the circumstances of a lie were almost bad. He squared his shoulders, and looked steadily at the kneeling lawyer.

"Well," he said slowly to the shocked assembly, "isn't that for—the magistrate—and not you—to ask?"

CHAPTER XX.

Extract from the Hamilton Breeze of November 13, 1914

COURT NEWS
(Continued)

"The Worshipful J. L. Tunbridge then read informally the arguments in the latter of the assault at the Hotel Hamilton, which is fully treated in today's supplement. Mr. Philip Hollister, by his counsel, represented that he had not been arrested, that he had voluntarily appeared before the Court, and that he was entitled, pending the recovery or the charge of Mr. Constant Diederick, the injured party, to be allowed to go in his own cognizance, or in the custody of his counsel.

"His Worship inquired if Mr. Diederick had made any statement or accusation, and was told that he had not yet regained consciousness, but was lying at the Cottage Hospital under medical surveillance. "The prosecutor, however, offered to show that Mr. Hollister had publicly threatened Mr. Diederick on the morning before the assault, and that the circumstances were such as to point conclusively to the fact that the assault could have been committed by no other person than Mr. Hollister. He also offered to bring in a transcript of a cable message filed by Mr. Hollister shortly before the attack, which message, addressed to one Vose of New York, was apparently a resignation of a position. He further offered the testimony of Mr. James Hartwell (vide supplement) to the effect that the position in question was one of conspiracy. The injuries to Mr. Diederick, he said, justified a charge of felonious assault.

"Mr. Edward Ballin and Mr. Peter Kirby of New York both guests at the Hamilton, volunteered to testify to the obvious good character of Mr. Hollister. "Mr. A—B—, Miss C—D—, and Messrs E—F—and G—H—(the names were ordered suppressed by the Provost Marshal at the request of the parties, upon their promises to appear at later proceedings) stated their willingness to testify to the facts immediately following the assault. These events, it is understood, include remarks by Mr. Hollister tantamount to a confession.

"Mr. Hollister, by his counsel, submitted that he had made no confession; and denied technical knowledge of the assault. "His Worship inquired if Mr. Hollister would furnish a bond in the sum of £500, and said that if this were done, he would release Mr. Hollister in the custody of his counsel to remain in Bermuda until Mr. Diederick recovers sufficiently to give evidence. The prosecutor's argument that Mr. Hollister was not admissible to bail, was refused on the ground that no arrest having been made, or indictment drawn, the question of bail was extraneous.

"MR. HOLLISTER: I thank Your Worship. I should like to ask a question. Is it necessary for the bondsmen to be disinterested, or can they qualify even if they may be involved in the case?

"WORSHIPFUL J. L. TUNBRIDGE: In this instance I will accept a cash forfeit from you one, inasmuch as all parties to the action and the object of the assault are present. A bond would have to be executed by a landed resident.

"THE PROSECUTOR: I insist that Your Worship can not make this an exception to the rule that—

"MR. HOLLISTER: I think that either Mr. Ballin or Mr. Kirby will deposit £500 cash with you as security.

"THE PROSECUTOR: Your Worship, I strenuously object! The law states—

"HIS WORSHIP: Mr. Hollister is not under arrest, and since there seems to be no reasonable doubt in his favor, I will accept £500 in cash in place of the usual bond.

"MR. BALLIN: I will have it here in five minutes.

"HIS WORSHIP: That will be entirely satisfactory.

"The amount was soon afterward forthcoming, Mr. Ballin having previously established his credit at the Bank of Bermuda, and Mr. Hollister returned to his hotel."

CHAPTER XXI.

"SUGAR?" asked Ballin's cousin, holding readiness the same style of tongs which he might have utilized.

"One, please," said Hollister, scorning the obvious and cloying compliment. He took the cup, and drank to Ballin's cousin with his eyes while he waited for her to baptize a slice of lemon in her own tea. "Well—the sky's clearing, isn't it?"

One glance at the spotless heavens

warned Mrs. Cloud that he was juggling metaphors.

"Y-e-s," she admitted. "But not too awfully fast."

Hollister sipped his tea in vast contentment. He liked the Green Door, and its tables on the waterside grass plot hardly three feet above the level of the harbor; he liked the velvet atmosphere; he liked his beverage; he liked the youthful simplicity of Mrs. Cloud's costume; and he was healthily and fervently in love with Mrs. Cloud.

"At any rate," he said, "Diederick saved me from a mighty ticklish explanation, didn't he? I wonder why he doesn't talk? He could if he wanted to."

Ballin's cousin blushed warmly, and she displayed much diligence in the study of botanomy, or divination by the activity of tea-leaves. Hollister was convinced anew that she was never lovelier than when one of those gentle tides of *coulour de rose* spread so delicately and so evenly over her neck and cheeks. It was in those interludes that her charm was most virginal and appealing. Otherwise, it was her splendid vigor and health which magnetized Hollister. In either case, he was entranced.

"Yes—surely," she faltered. Even though he regretted the cause of her embarrassment, he was too appreciative of the exquisite result of it to be contrite. He admired her, and thought unutterably gracious things.

"It's funny, too," he said. "He's playing possum so hard that all the nurses are gossiping about it; but he just lies there and won't speak. And he could say I did it, and try to get square with me for the punch I *did* give him—or he could accuse the man who actually hit him. Why doesn't he? And yet he looks people right in the face, and when they asked if I did it, he shook his head; and when they asked who *did* do it, he shook harder. He pretends he can't talk, but one of the nurses swears she overheard him talking to Hartwell when he called. I can't make any sense out of it."

Ballin's cousin ventured to raise her eyes, which exerted their customary influence over Hollister. He wondered sometimes why she didn't hear the beating of his heart.

"Anyway, with Mr. Hartwell at the hospital so much, and Edith having a nervous headache, we have a chance to talk things over."

"Fine," said Hollister. "That's what we both wanted, wasn't it? And you must have decided that I'm fairly safe, or you wouldn't be here now."

Ballin's cousin smiled her affirmative.

"Out here in the sunlight it doesn't seem quite so tragic as it did," she told him. "It all worked up to a climax, and then there was a tremendous smash, and now there's a lull. But I'm just as anxious to talk to you as I was yesterday."

"Yesterday!" echoed Hollister. Wasn't it a year ago yesterday?

Ballin's cousin dimpled. It was an unfair advantage to take of him.

"It's probably nothing but business—but—well, this is *my* side of it. In the first place, Peter Kirby introduced us at the Aspinwall—"

"You'll have to go back further than that," objected Hollister. "Won't you begin with Mr. Hartwell? Who is he, and what is he?"

"Why, he's one of the executors and trustees of my husband's estate."

"Oho!" Hollister was tinglingly alive to this new data. "I see! So you've known him for several years?"

"Only three. I never met him until afterward."

"And he's one of the executors? Is it impertinent to ask who the others are?"

"My brother-in-law—just the two of them."

Hollister was ready to emit the view hallo. On the *Devonian* Mr. Cloud had referred specifically to his relations with Hartwell. Here at last were concrete premises.

"That's mighty interesting. And—"

"Is there anything else?"

"Why, yes—unless you think I'm rude—and I hope you'll say so if you do. I'm only hunting for a good take-off before I jump. How about Miss Rexford?"

Ballin's cousin was vaguely disquieted. She crumpled the crepe makeshift which tearooms substitute for real napkins, and smoothed it out carefully.

"What is it you want me to say?"

"I understand that you found her by advertising—and that her references were all good?"

"Oh, yes."

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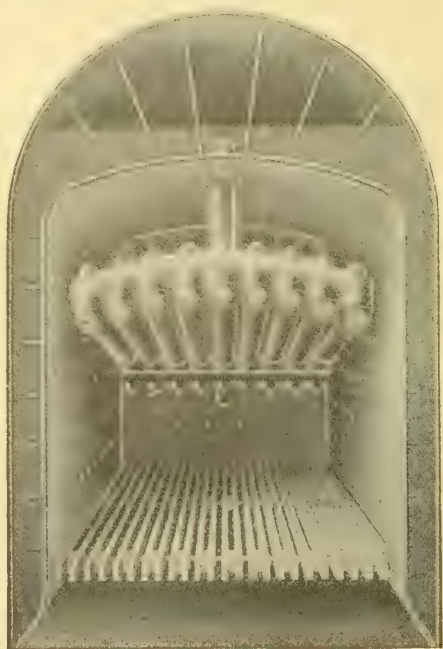
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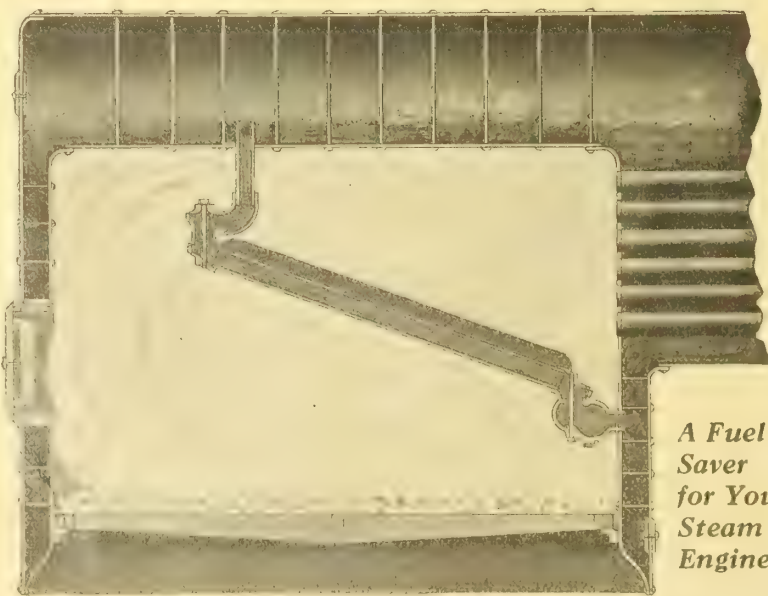
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"I don't recall, but Mr. Hartwell and my brother-in-law and Ned and Peter all agreed."

"Mr. Hartwell wasn't the one who first brought up the subject?"

"Not that I remember."

"All right," said Hollister, resting his elbows on the table and clasping his hands. "Now go ahead with that night at the Aspinwall."

Ballin's cousin was deliciously confidential as she bent toward him.

"Nothing happened that night—or for a day or two, until we met you on the *Devonian*. Ned and Peter had told me a great deal about you, and Ned had planned to give a luncheon so that we could meet. Then you dropped in on us, and we didn't have the luncheon! After you turned up so unexpectedly on the *Devonian* Edith began to talk about you. You and I discussed that at Fairyland. But after you walked with her—the evening I asked you to—she changed completely. She couldn't praise you enough. Then Ned and Peter and Mr. Hartwell came down."

"Since when," he said, "I've been lonely in the midst of a multitude."

Her smile was a very suitable reward. "Four or five days ago, when you and Mr. Cloud began to play together, and eat together before the rest of us were ready, Mr. Hartwell came to me and—he hinted that you were trying to make friends with Mr. Cloud for—superior motives. He's always advised me, you know. He repeated everything Edith had told me earlier and added something. And he pro—and after that, Peter talked to me about you—and he said that your being here was worth thousands of dollars to him and Ned."

Hollister proved mentally his psychological sum. $1+1+1=111$.

"Indeed!"

"That's exactly what he said. Then yesterday noon Ned came to me. He was—oh, frightfully excited. He said he'd heard you were going north; he wanted to know if I knew why. And when I said I didn't he said—I'll try to quote—he said that if you left Bermuda now it would ruin him and Peter both! He said it would mean a legal battle, and money, and reputation—and he wouldn't explain any more than just that. He said my brother-in-law would be affected, too—and I'd noticed that Mr. Cloud has been awfully worried lately. And Ned begged me to—to be so nice to you—if I could—so that you'd like it down here. I know this doesn't sound very terrible to you—but you didn't see Ned. He isn't very emotional—but he was perfectly livid. I knew it must be critical; Ned said that one single day would make all the difference in the world. So—I tried to make an appointment with you—"

Hollister was distraught.

"Why on earth didn't Ned come to me?"

"He said he couldn't. He said he hadn't any—I think he said 'pull' with you. And every time I made any movement either Mr. Hartwell or Edith or somebody else was there. I could send Edith off, of course, but they were right at my heels constantly—and when I saw how miserable both Ned and Mr. Cloud were—I—I lost my head—I didn't think of anything except that they must need you tremendously, and—and so—"

Hollister, with a tact which she never appreciated, was quick to interrupt her.

"And Ned and Pete were pretty lucky to have you for an advocate. I was just planning on the *Oceana*."

Ballin's cousin had an extenuation to make for Ballin.

"But you mustn't understand that Ned asked me to intercede—not that way! He didn't! He doesn't know that I have! He only wanted me to be indirect. But I can't be subtle when it's so much easier to be frank. And you know I wouldn't have—flirted with you to try to keep you here. I went to you of my own free will—and I was glad to do it for him! But I had to use my own methods. Are you so very angry with me?"

"I think," said Hollister, regarding her ardently, "that you've got just a little more loyalty than any one else I've ever known. I mean that. Not once, but twice—"

"Please don't!" she entreated him hastily. "We must forget that! Now it's your turn to talk to me."

"Before that," he corrected, "you ought to let me know what that slip of the tongue of Pete's was."

"Oh, yes. It was when we were going in to lunch. He said something about you not earning your salary, and Ned glared at him, and said very fiercely that another remark like that might cost somebody five years and a mint of money, and Peter

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illed! And at lunch Ned couldn't eat a mouthful. So I was surer then than ever that I had to have your word that you'd stay here—and that's exactly what I want you to talk about now. What is it, Mr. Hollister? What have Ned and Peter been up to?"

Hollister would have given much for the power to answer categorically.

"Ned won't enlighten you?"

"I should say not!"

"He doesn't seem very communicative and that's a fact. I've cornered him twice once yesterday, and he's wiggled like an eel. He wouldn't even admit that he's alive. Wouldn't Peter say anything?"

"Nor Peter."

"He wouldn't to me, either. And your brother-in-law?"

"Nor Mr. Cloud."

Hollister toyed awkwardly with his spoon.

"The worst part of it is—I do want so much to relieve you, but—as a matter of fact, I'd have to wade through a whole sea of broken promises if I went into the fine points. I haven't had a chance for a chance with Mr. Cloud yet—"

"But, Mr. Hollister! Only yesterday I asked you not to stay in Bermuda! An hour or two later Ned was telling me that he and Peter would be tremendously distressed if you didn't! They won't let me into their secret; they won't give me the tiniest little hint. I suppose they think a girl wouldn't understand—but when so many people I love are all so upset, and speak so queerly—I want to know! It isn't ordinary curiosity—it's the curiosity of—scars me. If it's just a matter of money, that would be simple—but you've all taken to saying such strange things about Mr. Hartwell—and you yourself are always letting drop innuendoes about Edith—"

Hollister would have had to be more removable than Gibraltar to have ignored her misgivings. Nevertheless, he was still under a primary obligation to Ballin, and a secondary duty to Mr. Cloud. He had sent a curt resignation to the address given him by Joshua W. Brown, so that he considered himself no longer bound by his verbal contract—but he was, morally answerable to Ballin for whatever he might say to Mrs. Cloud. He was therefore prevented from lodging accurate information against Miss Rexford; and he couldn't indict Hartwell without shattering the same covenant.

"Mrs. Cloud," he began lamely. "I'm afraid you'll put me down as a pretty poor reader—but really and truly, I know a good many things that I'm bound not to talk about. You see, I honestly did come down here on regular business. Peter was right; I suppose I didn't earn my salary, because it was high pay for very little energy; but that's neither here or there. I've finished it—and cabled New York that I'm through. I haven't any more sea than you have what Ned meant by smothering Pete that way. But Ned has told me certain things and sworn me not to breathe them to anybody—even to you. I have Pete. They're sort of detached and unrelated, and they don't signify much of anything to me, but I've got to be fair to Peter and Ned."

She sighed a trifle wearily, and shook her head.

"Then you have some conception of what all this rumpus is about—"

"Mrs. Cloud," he said, "I'm just exact—as much in the dark as you are. It staggered me when I heard that it matters to Ned or anybody else what I do or where I go. I don't know why it should—I haven't had any dealings of any kind with any of 'em. But it was represented to me that I did matter—and that's all there is about it."

"In other words, you're being loyal to your friends, too?"

"In a way—yes."

"And you truly don't know what the kernel of it is?"

"I wouldn't guarantee that I even now what the shell is! I'm trying hard to find out. And in the meantime, I'm absolutely at your disposal."

Ballin's cousin creased and uncreased his flimsy napkin.

"Well—I'd hoped—never mind! If you're guessing, too, there isn't a great deal of use in—brooding about it, is there? One last word—the things Ned and Peter told you aren't—they aren't—personal, are they? They aren't about me?"

"Not a bit of it—merely their private business affairs. It's probably nothing out of a financial fight with Mr. Hartwell." Ballin's cousin was flamingly intent. "A fight? Did you say a fight? Ned and Peter with Mr. Hartwell?"

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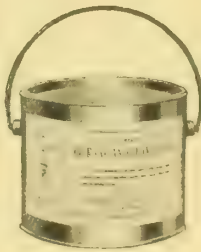
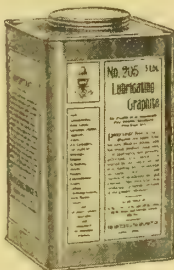
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Hollister could cheerfully have sawn off his tongue, and tossed it to the school of doctor-fish in the harbor for clinical research. His aspect was again that of the guilty schoolboy; he could feel the rubescence of his ear-lobes.

"I—that was—that just slipped out," he stammered.

Ballin's cousin clung relentlessly to the point.

"But is it true? Ned and Peter are having a fight with Mr. Hartwell? Is it?"

Hollister attempted to palter.

"Be that as it may—"

But the parenthetical alibi of George W. Monroe didn't suit the requirements of Ballin's cousin.

"Is it, Mr. Hollister?"

When his eyes met hers, he couldn't equivocate.

"I hope they'll forgive me. Yes!" he said.

Ballin's cousin took it quietly enough, and only the rise and fall of her bosom betrayed that excitation she was endeavoring to conceal.

"That—is—surprising," she managed.

"I ought not to be let loose without a keeper!" said Hollister remorsefully.

"But the cat's out of the bag now. I never did like cats anyway."

Ballin's cousin composed herself with an effort.

"You don't know if it has to do with me?"

"Why should it?"

"Well," said Ballin's cousin, "it shouldn't—but it might be."

Hollister nearly overturned the table in the tumult of his eagerness.

"Mrs. Cloud! You're not engaged to him?"

Her reflex was as pronounced as it had been on the *Devonian* when he attempted to congratulate her.

"No! Oh, no!"

"But he's—he wants you to be?"

"He's insufferable!"

"Then I've got it! I've got it! That's the cause of the whole riot! Ned and Pete and Mr. Cloud and Hartwell and you! He's got a hammer-lock on 'em somehow—he's trying to influence them through you! Mr. Cloud has had business with him—he told me so himself! Ned and Pete have too—they told me so! They're afraid to oppose him—and you say he's insufferable to you! And there you are!"

Ballin's cousin was very wide-eyed and white.

"That's incredible!" she said dully. "It's simply incredible! But—it would explain a lot! I never thought of that before. I wonder if that's it?"

"What else can it be?" he demanded.

"To—to marry that man—ugh!" Her shudder was thoroughly expressive of her aversion to the fat lawyer. "But, Mr. Hollister! What hold can he possi-

bly have on them? They wouldn't let me marry him to save themselves money! They wouldn't dream of it! And as for urging me—they haven't done that—they've only praised him a little—" She bit her lip, and stopped.

Hollister sat back petrified.

"They've praised him to you? Recently?"

"N-not so much since they came down here. They've urged me to be—friendly with him."

Hollister shooed away a too-expectant waitress.

"We've got the kernel, then! We've got the gist of it anyhow! I told you I'd try to arrange to stay in Bermuda for your sake—well, I will! I'll smooth Mr. Cloud down somehow. I'll get hold of Ned and Pete and your brother-in-law, and I'll go up to the Cottage to see Diederick. If he's Mr. Hartwell's law partner he must be in on this somehow. I'll give him the third degree, too, and we'll straighten out this tangle in a hurry!"

Ballin's cousin gave him her hands across the table.

"You're wonderfully good to take such trouble for Ned—not that he doesn't need you strongly, because I'm positive he does—"

Hollister's voice went gruff and shaky.

"It isn't altogether for Ned—I've said over and over again, it's for you—"

(To be continued.)

Aunt Malinda

WHEN it comes to writin' obituaries and puttin' on the soft pedal concernin' folks' shortcomin's and lowerin' their remains gently to their last earthly habitation, Silas stands next in order to the late lamented George W. Childs, of the Philadelphia Ledger. It takes an artist to dress up a rough and tumble old bat in grave clothes and make him appear comfortable, when maybe in all his life he never wore a white shirt or standin' collar. I've watched folks, in the days before the professional undertaker existed, tackle a hard job of this kind and after they'd stropped their razors a few times and pealed off a growth of perhaps weeks or months, even the mourners felt relieved at the change.

Back in the early days before Silas earned his daily bread by the pen, in the little village where we first lived together, once in a while when a tough old rooster ceased to crow and they wanted him fixed up ready for his celestial wings, they'd come to Silas for a box of salve and Silas, like the hypocrite he was, would sit down and draw a picture of a "hard-boiled," but the lines'd be so softened that ere you'd finished the obituary you'd begin to wonder if you hadn't misjudged the "late lamented," and before you realized it you'd find the "sugar water" tricklin' down from the maple tree of your human soul.

I'm not much on death-bed repentance. Of course it's better than none and I've read and sometimes re-read some of these obituaries to find out how it could be done. You'd have to read between the lines sometimes to ascertain from whence the scatterin' straws of good deeds had been gleaned, enough to make a regulation sized bundle for the threshin' machine which separates the pure grain from the chaff pile.

I mind the time once when the editor of our local paper was absent from home and a woman whose father was one of Silas's dearest friends committed suicide by hangin' herself. The father sent for Silas and asked him to write the obituary and 'lowed that Silas knew just what to say. Here was a woman whose soul had been sent into eternity by her own hand and all her folks were layin' the charge at the door of her husband because he drank and mistreated her. Here was the husband of this woman, broken-hearted, with little motherless children left on his hand; and he, too, sent for Silas.

"You don't reckon that you'd feel especially hilarious over havin' such a trust as this committed to your charge, would you?" is what Silas answered when I asked him how he was goin' to smooth out the rough places in this case and draw the broad mantle of charity over the scene.

Folks had come from all over, from far and near, hundreds of 'em, and the tongues of gossips wagged without ceasin', day and night. Of course their sympathies were with the friends of the woman, who, they declared, had been driven to the most ignominious death. Silas and I drove out to their country home, and looked upon this saddest of sights and heard remarks from many sources. Neighbors and friends gathered around the stricken parents of this young woman, offerin' them sympathy, but hardly a soul spoke to the husband, a big giant of a man, whose body was convulsed with sobs for many hours. Silas and I went in and talked to this man, whose soul was in the Garden of Gethsemane. I made some coffee

and Silas insisted that he drink a cup, puttin' his arm around him gently, and that nearly broke his heart. Then we induced the relatives to partake of a cup of coffee and we drove back to town. Every extra copy of the Chronicle was purchased before nine o'clock on the morning of publication, and the picture which had been painted had softened down the hard and flinty facts until both sides felt that it couldn't have been done better. Comment soon ceased and the harsh thoughts which could in no way benefit the dead and which couldn't help but embitter the livin' were toned down to the minimum.

Writin' obituaries and commentin' on suicides isn't a very hilarious subject at any time and there isn't much connection between these subjects and that of the anniversary boostin' of your own business. The thought came to me while I was enjoyin' the sunshine and orange groves of California that I'd be expected to respond to the toast on the twenty-second anniversary of our publication. Of course, where we started in business in '98 an undertaker now wears a frock coat, looks grave, and allows services to be conducted in the nine by sixteen chapel. Folks who knew Silas in those days used to stop and tender their sympathies and offer to become pallbearers for this publication without charge. Maybe these chronological facts sorter got my mind crossed between usin' graveyard flowers and birthday beauties.

Silas wrote me t'other day sayin' that "Uncle Bill" Newsom, a Hoosier of the first rank, president of the Threshermen's National Protective Association, president of the Indiana Brotherhood of Threshermen, president of the Indiana Liberty Mutual Insurance Company, and a few other things, had been visitin' him and that he'd showed him the "coffin-shop" where we started business and that Bill seemed to feel perfectly at home even where they kept 'em in cold storage. Silas said that this was no insinuation that Bill was a dead one. On the contrary, W. H. Newsom is considered one of the pillars of thresher organization and a tower of strength to the cause in which we're all interested. I heard Silas tellin' Charley Doring one day that if Bill Newsom wasn't the "daddy" of thresher organization it was a cinch that he was a mighty good step-father, that he'd given his time and ability—and Old Bill's got lots of ability or he'd never have been able to stem the tide of Indiana politics—for the cause of upliftin' the threshermen's business even to greater heights of success.

This brings me back to the subject assigned to me, that of boostin' the game and sayin' how we've grown and how much benefit we've been to the threshermen, and all that. This I'm perfectly willin' to do although I can't weep any crocodile tears nor paint a picture that'd have as great an effect on my readers as Silas's obituary did on the people of Colfax forty years ago.

I'm not goin' to blow a trumpet unnecessarily loud but when I look back over the green fields and think of the many happy hours and then again of the sad days of our lives which have intervened since that famous obituary was printed in the weekly little newspaper, on what Silas used to call his "G. Wash. printin' press," where one boy rubbed the roller across the forms and another yanked the lever that made the impressions—

when I look back to the little beginnin' where Silas, without education, presumed to edit a newspaper—and then come on down to the present and think of the many presses necessary to give you this magazine, and the number of people required to do the work, it seems like a dream that I can scarcely believe to be true.

While admittin' that we're some "pumpkins" from the standpoint of business, I'm not goin' to forget to offer a whiff of the sweet smellin' fragrance that comes wafted on the breeze from all the grain growin' states in the Union, to the men and women and the little children all over this country whose fidelity to us has been equally as real as the good which we've tried to do for them.

In every home where a thresherman abides the wives, mothers, sweethearts and sisters have read our offerin's and are known to us. The parents have told me times without number of how the children scramble for a first look at their own magazine. The good women, from the aged grandmothers to the little ten-year-old daughters, have been my greatest inspiration in the little which I've tried to do for them. To me it has been like a visit or a personal letter to each of 'em and to the boys on the farm. God bless these boys! They're our salvation in time of war and our dependence in peace. How my heart went out to you boys when shot and shell were burstin' around you, while you were fightin' for humanity and its cause. Do I love you boys and girls? The Great Captain of Our Salvation knows how well I love you all. If we'd grown in prosperity and left you behind because of any act of ours or because we'd not tried to do our whole duty towards you, then prosperity would mean but little to me. But havin' helped you lift the load and bear the cross in the hard battle which was yours, wherein Silas fought with you and for you to build up organization and business principles among you, and which has given to every man who threshes grain a more even divide, I feel it all the more a pleasant duty to tell you at the beginnin' of the twenty-third year of our business how much we love you for your fidelity in your own and in our cause.

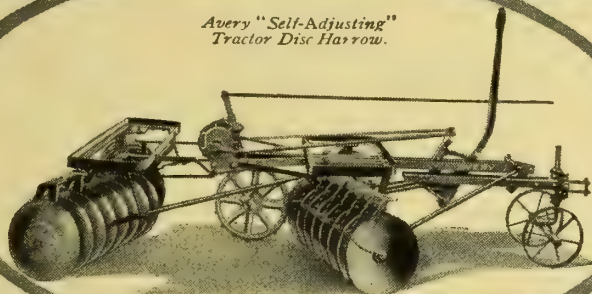
The record which we have made has been with your help, and it could never have been accomplished exceptin' by a concerted effort, which the threshermen and farmers who patronize us have helped make possible. When folks pull together, they can perform wonders and almost miracles, just as they can tear down and destroy by workin' at cross purposes, as the whole world seems to be doin' at this time. There never was a time more opportune for men and women to get together in an effort to overcome discord and distrust, and help to bring about a return of common sense in the business world.

May the Giver of All Good continue to bless you and make you to prosper in the years to come in greater measure than ever before, so that when the time comes for havin' our obituaries written at the end of life's journey perhaps some of you will help soften down the hard places and, as Silas did in that obituary of his in the long ago, sprinkle a few sweet-smellin' flowers of forgetfulness over our mistakes and give us credit for the good intentions we cherished in our hearts for you all.

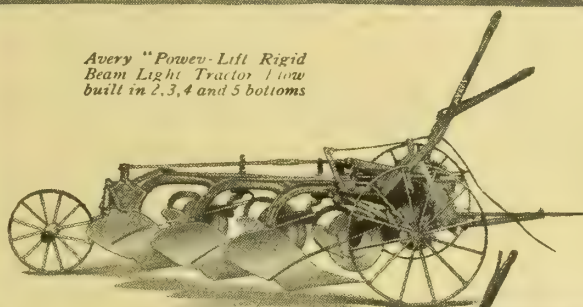


Avery Tractor pulling
Avery "Self-Adjusting"
Tractor Disc Harrow.

Avery "Self-Adjusting"
Tractor Disc Harrow.



Avery "Power-Lift Rigid
Beam Light Tractor Plow
built in 2, 3, 4 and 5 bottoms



Let an Avery "One-Man" Outfit Help You Solve Your Labor Problem

Everywhere the problem of securing farm labor is becoming more difficult. In some sections of the country it is reported that it is impossible to get good farm labor. And much of the labor now on the farms is drifting to the cities at the call of high wages and short hours.

You who are worried about your farm labor problems, can relieve yourself of many of them by letting an Avery "One-Man" Outfit help you.

Avery "One-Man" Outfits are of several kinds—one-man tractor plowing outfits, one-man tractor listing outfits, one-man tractor disc harrow outfits, and one-man tractor grain drill outfits.

First you can get an Avery "One-Man" Tractor Plowing Outfit to exactly fit your requirements for Avery Tractors are built in sizes for every size farm, and with it you can get an Avery Light or Heavy "Power-Lift" Moldboard or Disc Plow for any size Avery Tractor.

Or you can get an Avery Two-Row "Self-Lift" Lister to use with your Avery Tractor.

Then when your plowing is finished you can pull an Avery "Self-Adjusting" Tractor Disc Harrow behind your tractor and operate it alone too, for the new Avery Harrow is operated from the tractor platform. A pull of the cord throws it from straight to angle position and from angle to straight position without stopping or backing up.

You can also plant your crop alone with an Avery "One-Man" Outfit by using the Avery "Power-Lift" Tractor Grain Drill—a drill that has more exclusive features than any other—features that help assure you a better crop.

All these tools being power operated and handled by a cord from the tractor platform, you can do this work alone.

Avery Tractor Plowing and Tillage Outfits are the most economical power units possible because all are real "One-Man" Outfits. You can also do your work in the right way and at the right time—to raise bigger crops at less expense and make more money.

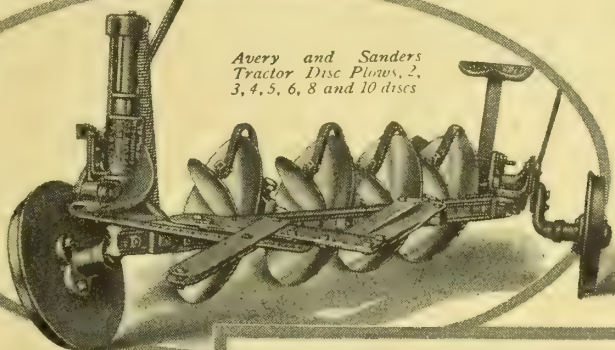
The Avery Line

In addition to these "One-Man" Tractor Outfits that help solve your labor problems and keep down the costs of raising your crops, the Avery Line of Tractor Drawn Machinery includes Special Orchard and Brush Plows, also Orchard Harrows. The Avery Tractor Line includes six sizes of Tractors, 8-16 to 40-80 H. P. with "Draft-Horse" Motors and "Direct-Drive" Transmissions; two small Avery Tractors, Six-Cylinder Model "C" and 5-10 H. P. Model "B." We also have a complete line of Roller Bearing Champion "Grain-Saver" Threshers, Silo Fillers, etc. Write for free catalog.

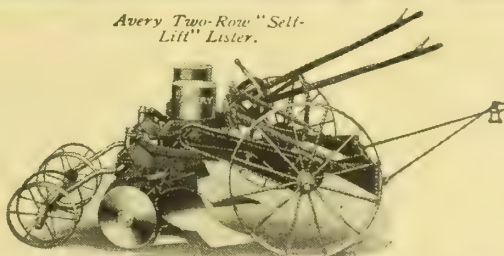
Avery Co., 334 Iowa St., Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and San Francisco. Distributors: Avery Company of Texas; Dallas, Amarillo and Beaumont, Texas. Also Other Principal Machinery Centers

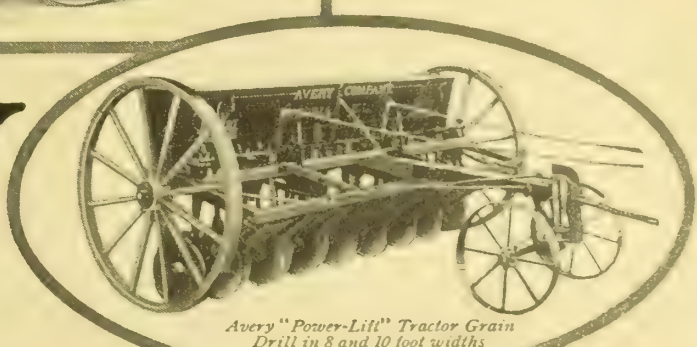
Avery and Sanders
Tractor Disc Plows, 2,
3, 4, 5, 6, 8 and 10 discs



Avery Two-Row "Self-Lift"
Lister.



Avery "Power-Lift" Tractor Grain
Drill in 8 and 10 foot widths



AVERY

**Motor Farming, Threshing
and Road Building Machinery**



Atkins Silver Steel Saws

For Your Outfit

The unusual high quality of the steel and the expert technique of manufacture are why Atkins Inserted Tooth Circular Saws cut more efficiently. Both Bits and Holders are drop forged by special machinery.

**ATKINS SILVER STEEL
Segment Ground Cross Cut Saws**



Turn timber into money at less expense. Their fine temper and perfect material assure you exceptional edge-holding qualities. They cut any way easily in hard, tough or wet timber.

As save you money on your saw problems. Write for our free book, "Saws in the Filing Room."

"A perfect Saw for every purpose"

E. C. ATKINS & CO., Inc.

Established 1857

Home Office and Factory:
Indianapolis, Ind.

Canadian Factory:
Hamilton, Ont.

Machine Knife Factory:
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Atlanta
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New Orleans
New York City

Portland, Ore.
San Francisco
Seattle

Vancouver, B. C.
Sidney, N. S. W.
Paris, France

Mention The American Thresherman and Farm Power



One Good Hot Spark in a little loose chaff and the fireworks begin. Many a thresherman has seen his savings for years go up in smoke in this way and not only the threshing outfit, but the customer's grain and buildings, too. Prevent this ever happening to you and your customers. The small cost of a

South Bend Spark Arrester

will save you from all danger of fire and the worry about the possibility of a fire. It will fit any engine stack and will not hinder the draught.

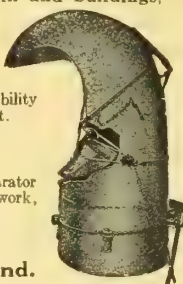
A South Bend Stacker Hood

places the straw where you want it and is easily handled by the separator man. It is sold on a make-good trial basis. If it doesn't do your work, you return it and it costs you nothing but your time in trying it.

Write for prices of one or both of these products.

South Bend Spark Arrester Co.

South Bend, Ind.



Mention The American Thresherman and Farm Power

Asked and Answered

Question of A. M. Is a No. 6 electric cap stronger than an ordinary No. 6 cap?

Answer.—No; they are exactly the same in their detonating effect.

Question of J. E. M. I have trouble with the water glasses breaking out of my

18. Can you give me any suggestions as to how to remedy this?

Answer.—In putting in a new water gauge glass it is necessary to make sure that both upper and lower sections are in line with each other. For if one is slightly twisted enough so that the glass bears against one side of the brass connection, the expansion of the glass is almost sure to cause breakage when steam is turned on. In cleaning a glass be careful not to scratch the inside of the tube with a metal point. A slight scratch on the inside of a glass tube is almost certain to start a crack. If the rubber gaskets which make the joints between the brasses and the glass are not so fitted that the strain will come perfectly even, breakage of the glass may be the result.

Of course, sometimes one gets several glasses that are not perfect and that do not last long even if properly installed. However, if you have a good heavy glass without flaws and install it carefully so that you are sure that no side strain will come on the glass when the glass expands with the heat, you should be able to get the glasses to stay.

Question of A. B. Is forty per cent dynamite twice as strong as twenty per cent?

Answer.—No; it is about two-fifths stronger. On the strength basis, one and two-fifths sticks of twenty per cent equals one stick of forty per cent. However, under nearly all soil conditions the actual strength of the explosive is not considered. The action of the explosive is what counts. Twenty per cent is much slower than forty per cent; therefore it has a greater lifting and heaving effect, and is usually better for stump blasting, used pound for pound.

Question of F. P. W. Can you give me a special formula by which the proper length of drive belts may be figured? How should one proceed to find out the speed at which a tractor should run providing it is old and there is no specification about it? How should one figure the horse power of such a tractor? How can one figure the miles per hour of travel that the tractor should develop? How should one determine the drawbar pull?

Answer.—I cannot give you a

formula for figuring the proper length of drive belt. In general we may say that the belts used with gas tractors are considerably shorter than those used with steam traction engines. Probably the reason for this is, that in work such as threshing work where a steam engine is used it is advisable to have the steam engine at some distance from the work, so as to cut down the fire danger to a minimum. As far as the transmission of power economically is concerned it is not necessary to have as long a belt as usually is used with a steam threshing engine. Probably any good belting manufacturer can give you some interesting information along this line.

It is rather difficult to determine what the speed of an old tractor was supposed to be providing the specifications are not available. Probably you will not go far wrong if you take it for granted that the piston speed of your engine should be about eight or nine hundred feet a minute. Some T-5-Questions&Ans-Gal. 2-Schuler engines are designed to have a piston speed of less than this, and some a piston speed of more than this, but suppose we take eight hundred feet a minute to figure from. You do not say what the bore and stroke of the tractor engine is. For convenience suppose we say that the stroke of the piston is six inches. Then in every revolution of the fly-wheel, the piston will travel one foot going through two full strokes. In this case then, in order to have a piston speed of eight hundred feet a minute it will be necessary to run the engine at eight hundred revolutions a minute. If the stroke of the piston were eight inches, then it would travel 1 1/3 feet in every revolution and in order to have a piston speed of eight hundred feet a minute, the revolutions per minute of the motor should be six hundred.

To figure the horse power of an engine, use the following formula:

$$\frac{D^2 \times L \times R \times N}{18,000} = \text{Horse Power}$$

In which D equals the diameter of the cylinder in inches; L the stroke of the piston in inches; R the revolutions of the crankshaft per minute; and N the number of cylinders.

If you have the revolutions per minute of the motor and the ratio of the gears you can figure the speed of travel of the tractor. Possibly the simplest way to get this speed, however, will be to take the tractor out and run it over a measured distance, and time it, thus finding directly its speed.

The drawbar pull of tractors usually is considered to be about half of the belt horse power. Suppose you have a tractor that will develop 20-horse power at the belt, you will

CUSHMAN

Light Weight Farm Motors

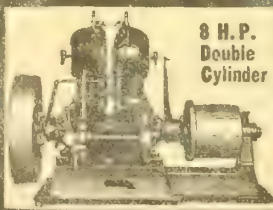
Weigh only 40 to 60 pounds per horsepower, about one-third as much as ordinary farm engines, yet are more powerful, more durable, more economical.

We get increased power without increased weight because of an improved design, better material, higher grade mechanics,

4 to 20 H.P.

accurate balancing and improvements in carburetion, ignition and lubrication.

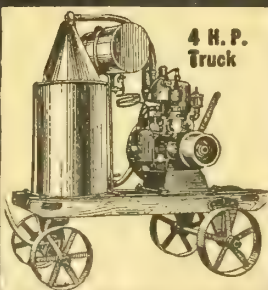
Because of their light weight, and also because they can be run at various speeds, Cushman Motors are known as All-Purpose Engines. They not only do all stationary jobs, even more satisfactorily than ordinary engines, but they may be attached as power drive to such machines as harvesters, hay presses, corn binders and pickers, potato diggers, etc.



8 H.P.
Double
Cylinder

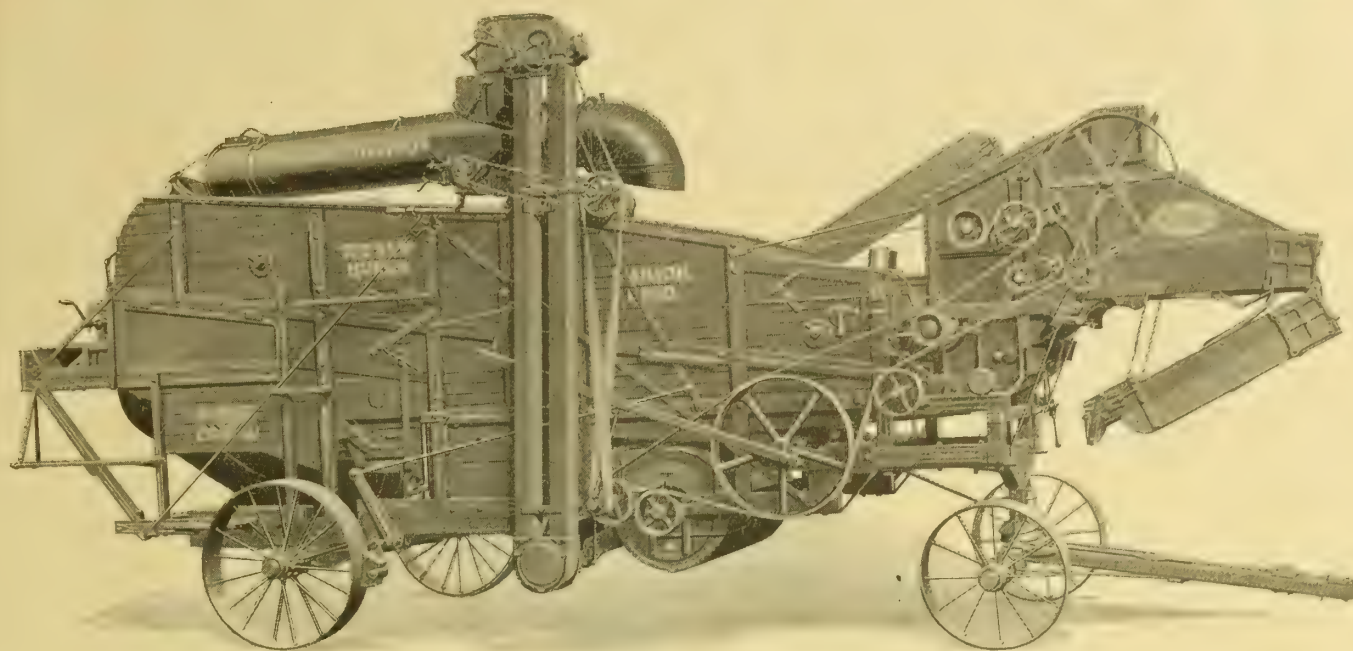
Cushman Motors are equipped with an accurate Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump, without extra charge. (310)

Write today for book on Light Weight Farm Engines.
CUSHMAN MOTOR WORKS
875 North 21st Street
Lincoln, Nebraska



More Power per Pound

Mention The American Thresherman and Farm Power



The Largest Earner

FOR the business thresherman this outfit is more profitable than any other he can buy. It's faster, requires less power, and lasts longer. All of those things mean less expense to the thresherman. And it helps him keep the farmer's patronage and good-will because it threshes clean and "saves the grain."

New **HUBER** Threshing Outfit

The big 12-bar cylinder combined with adjustable concaves insures first class work in long straw or short, dry or damp grain, whether the yield is heavy or light. That's why it "saves the grain."

The counterbalanced straw racks provide the maximum of agitation with a minimum of vibration on the machine. As one goes up the other comes down and that eliminates pounding and saves power.

■ Pitmans which drive these racks are on the outside of the body, permitting the use of a wider rack with a larger capacity.

The New Huber Separator is double belted. Power is carried from pulleys at each end of the cylinder shaft to every moving part. Automatic belt tighteners keep the tension greatest when the load is greatest, regardless of the stretch or shrinkage of the belts.

■ New Huber traction engines get more power from the fuel they burn because of the return flue boilers which carry the heat through the water twice before it leaves the engine. Every bit of fuel is consumed in the double combustion chambers.

Write for "It Saves the Grain," a Huber booklet that describes this new thresher. "More for Less" tells you about Huber engines.

BRANCHES:

Harrisburg, Pa.	Lansing, Mich.
Indianapolis, Ind.	Peoria, Ill.
Wichita, Kans.	Des Moines, Ia.
Lincoln, Nebr.	Fargo, N. D.
Minneapolis, Minn.	
CANADIAN BRANCH, Brandon, Man.	

The Huber Manufacturing Company
445 Center Street
Marion, Ohio

Makers also of the Huber Light Four Tractor

"NORMA"

PRECISION BALL BEARINGS

(PATENTED)



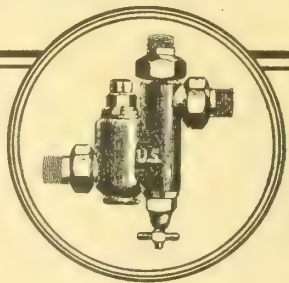
The majority may not always rule—but its concerted judgment is quite apt to be correct. By far the great majority of high-grade magnetos and lighting generators are "NORMA" equipped. Which indicates a striking unanimity of opinion among manufacturers who place serviceability before price. And the performance of their machines justifies their judgment in standardizing on "NORMA" Bearings.

See that your Electrical Apparatus is "NORMA" Equipped.

THE NORMA COMPANY OF AMERICA

Anable Ave., Long Island City, New York
Ball, Roller, Thrust and Combination Bearings

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam traction field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

expect a drawbar horse power of about ten. There are thirty-three thousand foot pounds of work in a horse power. Then in 10-horse power you will have 330,000 foot pounds of work. There are 5,280 feet in a mile. If your tractor operates at a speed of three miles an hour, you will be traveling at the rate of 15,840 feet an hour, or about 260 feet a minute. If your engine is developing 330,000 foot pounds of work a minute at the drawbar and you are traveling at a rate of speed of 260 feet a minute, your engine should develop a drawbar pull in pounds of about 1270. If you were traveling twice as fast as this, your drawbar pull in pounds would be approximately one-half as much. If you were traveling at the rate of one and one-half miles an hour instead of three miles an hour, probably you would be developing about twenty-five hundred pounds pull at the drawbar. The only way to measure accurately the pounds pull at the drawbar is by means of a dynamometer.

Question of E. M. What is the best tool for making holes under stumps?

Answer.—Practical men recommend the driving iron and a ten-pound hammer.

Question of E. W. P. Would it be advisable for me to reline a boiler that has been used for fourteen seasons, but which never has given trouble with flues leaking and in which the flues seem to be in good condition at the present time? This is a straw burning boiler, but I never have used anything but coal and wood to heat it. It always has received the best of care at my hands.

Answer.—From what you say about your boiler I should hardly think it would be necessary to put in new flues. Fourteen seasons is quite a time for a boiler to run and still be in excellent condition, but from what you say, you have given the boiler use that was not at all hard on it, and probably you have given it excellent care. It would be very possible under such conditions for your engine and boiler to be in better repair than some other man's boiler which has been operated less than half the time.

If you feel any doubt about this boiler I should suggest that you give it a cold water test to make sure that there is no danger, but I do not believe that I should put in new flues unless the old flues leak, or unless you can tell by an examination that the old flues are in poor condition.

We have so often given directions for testing a boiler by the cold water process that probably you are familiar with how to do this. If

not I shall be glad to send you detailed directions if you write to me and ask for it.

Question of G. H. Will dynamite stored over winter be fit to use in the spring?

Answer.—Yes; if it has been properly stored in a dry, well-ventilated place.

Question of A. T. F. Why do nearly all tractors and automobiles draw the wind through the radiator instead of blowing it through? It seems to me that it would cool the machine just as well, or better, if the air were blown through the radiator instead of drawn through from the front.

Answer.—If you were to run your fan in the tractor so as to blow the air from the engine out through the radiator, the air would be warmer when it hit the radiator and would not be so efficient in cooling the water in the radiator system. Of course this point would not be so very important, because the air would have absorbed the heat from the engine before reaching the radiator and therefore, would already have done some cooling. Suppose, however, that your tractor is facing into a wind. If you are drawing air through the radiator, this wind will assist the fan in keeping the radiator cool. If you are trying to force the air out of the radiator, you will have to work against the wind and will get very inefficient cooling. If you have the wind to the back of the tractor and are drawing the air in through the radiator, the air will, of course, be drawn in the opposite direction to the direction of the wind but because of the force of the wind being broken by the tractor itself the wind will not cut down the efficiency of the cooling system to such a large extent. I think perhaps this is the strongest argument that could be given for drawing air through the radiator rather than for forcing it through from the inside.

In the case of an automobile this would be much more noticeable because the speed of the car would at all times help to neutralize the cooling efficiency if you tried to force the air out in the same direction that the car was moving.

Question of A. G. What is the best dynamite for cracking rocks?

Answer.—For "mudcapping" fifty per cent straight nitro glycerine dynamite is best. Twenty per cent red Cross Extra Dynamite may be used successfully for throwing boulders out of the ground; and if the charge is placed close against the under side of the stone twenty per cent will usually break it in several pieces small enough to be easily handled.

Organization Notes

(Continued from page 22.)

insurance that every man was ready to respond to his request.

As the meeting adjourned, everyone was high in his praise of the manner in which it had been handled and ready to look forward to even a better meeting at the next gathering of Missouri threshermen.

Ohio Threshermen's Insurance

We are enclosing herewith two photographs, one from Ben Stammen of New Weston, Ohio, of a separator that was insured by our association and was damaged by wind

ning and cyclone as well as fire, at the sum of one dollar per hundred dollars.

GEORGE DURBAN, *Secretary*.

Minutes of Delaware Meeting

The threshermen of Delaware met at Dover, Delaware, Tuesday, April 6, 1920, at which time they organized the Delaware Threshermen and Farmers' Association.

The meeting was called to order at 10 A. M. by F. W. Hills, who was elected temporary chairman, with N. G. Rose as secretary.



Engine Damaged by Wind for John Hewer of Burkettsville, Ohio.

orm on April 4. You will notice this photograph that this separator was completely blown over, being totally wrecked.

The other photograph is from John Hewer of Burkettsville, Ohio, an engine that the wind storm had damaged by blowing off the cab. This engine was also insured by our association.

We have had another loss, Kinder and Shade, of Gratis, Ohio, where the separator was damaged. We do

W. H. Newsom, president of the National Association, addressed the meeting on "Benefits of Organization," and H. R. Kellogg of the New York Brotherhood spoke on organization work.

After hearing these good men talk on the advantages of organization, twenty-three threshermen joined the association; the meeting then adjourned for the morning.

The afternoon meeting was called to order at 1:30 P. M. and the follow-



Separator Belonging to Ben Stammen of New Weston, Ohio, Damaged by Wind Storm.

not happen to have a photograph of this, but we will get it later. We believe that the threshermen ought to take the warning and should know that the Ohio Threshermen's Mutual Insurance Association is the best and the cheapest insurance for threshermen in the state of Ohio; because we cover a very broad field, insuring against wind storm, light-

ing officers were elected: president, B. B. Bowden, Seaford, Delaware; vice-president, H. H. Hance, State Road, Delaware; secretary-treasurer Walter Geist, Newark, Delaware.

These officers were installed, an executive committee appointed, and a name for the association selected, after which the following men addressed the meeting: J. A. Rose of

Atlas

The one thing that you want, most of all, in a canvas belt—you get in the fullest measure in Atlas.

You want long wear. And Atlas are chuck-full of that. They're full capacity, full speed, full time belts. Seldom a breakdown—never a regret.

Sizes for every purpose. Shipped direct or through your dealer.

Acme Belting Company
Manufacturers
Niles - - Michigan

Belting

Mention The American Thresherman and Farm Power



Where *real stuff* shows up!

IN those much-used grain sacks rapidly filling up with their golden cargo is the *real proof* of what sort of stuff the separator is made. If it's a grain saver, the grain goes into the sack—not the stack. If it's a compact, speedy machine, those sacks certainly fill up so fast that they keep the fellows humming. If it's a separator that cleans the grain slick and shiny, it looks mighty good as the open mouth of the full sack is jerked away.

The Humming Bird Separator shows that it has the *real stuff* in it—that it's a thoroughbred when it comes to getting the grain—the maximum of it—swiftly, satisfactorily and clean.

Drop us a postal for large catalog.

Wood Bros. Thresher Co. Des Moines, Ia.

AT-M

Best for Every Farm Use

Red Seal Dry Batteries



Avoid ignition troubles by using Red Seal Dry Batteries. These batteries are in reality convenient storehouses from which electric current can be drawn at will. They furnish fat, hot sparks that spur your tractor or farm engine into action and keep it running at par. Recommended as the most efficient, satisfactory and economical medium of ignition for all purposes.

The Guarantee Protects YOU!

Under every condition, regardless of weather, and no matter how rough the going, these famous batteries will supply you with reliable farm power at least cost. Thousands of tractor owners will use no other! Absolutely best for tractors, farm engines, autos, door bells, hand lanterns, telephones, etc. Study the label! Insist on genuine Red Seal Dry Batteries.

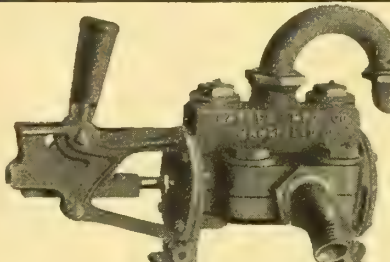
ASK YOUR DEALER

Under our plan, every dealer's supply of "Red Seals" is always fresh. No chance for you to get run down stock. Ask for them by name.

When you buy Red Seal Dry Batteries, ask your dealer for FREE book, "How to Run the Gas Engine" our famous handbook for engine owners.

MANHATTAN ELECTRICAL SUPPLY CO., Inc.
New York — Chicago — St. Louis — San Francisco
Factories: at Jersey City; St. Louis; Ravenna, Ohio

Mention The American Thresherman and Farm Power



BARNES' Peerless Double Acting Tank Pump is the Pump You Need

Because it will save you money from the first stroke of the handle. It pumps the water faster with less effort. The valves have separate caps and can be easily reached. This pump is built for hard service. It has been tested under all conditions and has always made good. It can also be furnished with plain head. We also manufacture the FAVORITE TANK PUMP. Write for circulars and prices.

The Barnes Manufacturing Co.
800 N. Main Street Mansfield, Ohio

Mention The American Thresherman and Farm Power



LINK 4-IN-1 HOOD

—AND—
OIL-RIGHT LUBRICATOR

Clean Straw for 10c per acre. Surely it is worth that much and 3 days at that price pays for the Link Hood.

It is the Only Hood that cleans straw, builds better stacks and Saves the Chaff.

It is worth while to get our hood circular. Write for it today.

OIL-RIGHT Lubricator—Guaranteed to save enough oil in a season to pay for itself. And it takes away the most dangerous job on your rig.

Thirty thousand satisfied users. It will please you.

Holds two gallons

Costs only \$8 00.

Grain Saving Wind Stacker

Save Grain—We guarantee to save grain on your separator, any make or size, and clean a share of the dirt out of your straw or refund your money and you may keep the stacker.

Write us about it today.



Liberty Grain Blower

Let your engine or automobile elevate your grain and clean it at the same time. It raises the test. Takes out all mould, rust and grass seed.

Costs only about 1/2 as much as the old style—is easier to move and takes less space. Send for particulars.

LINK MANUFACTURING CO. KANSAS CITY, MO.

Harrisburg, Pennsylvania; O. A. Taylor, of Wilmington, Delaware; J. B. Parker of The American Thresherman and Farm Power, Madison, Wisconsin; H. P. Kellogg of New York City, and several others.

A motion was made and seconded that the Delaware Thresherman and Farmers' Association become a member of the National Association. Walter Geist was elected director to the National body, after which the meeting adjourned.

WALTER GEIST, *Secretary.*

Truesdell Located in Michigan

It may interest some of the Michigan Brotherhood members to know that G. H. Truesdell, who for many years was employed by the J. I. Case Threshing Machine Company, will be active in the Michigan field as a salesman for the Port Huron Engine and Thresher Company. No doubt he is already a familiar person to many of the Michigan brothers.

Central New York Convention

On June 25 and 26, the Central New York Convention of the Threshermen's Association will take place at the factory of Quick & Thomas Company, Auburn, New York.

This will be the fourth Auburn meeting and promises to be the best ever. Speakers of note will be on hand, a Tractor and Thresher School will take place, a fine exhibition of machinery will be shown and the usual good hand of fellowship extended by everybody to everybody else.

Every thresherman in New York state should attend.

Edwardsville Meeting

The Edwardsville Association of Threshers held a meeting at Edwardsville, Illinois, March 20, 1920. The association voted an increase of two cents on wheat and one cent for oats per bushel for threshing the coming season.

The Illinois Threshermen's Mutual Insurance Company now has the required amount of applications, and all members that have their threshing machines insured will receive their policies in about thirty days. The meeting at Edwardsville was a grand success. Next meeting will be held in the Bohm Hall, Edwardsville, Illinois, June 5, 1920 at 1 P. M. sharp.

J. A. ZELLERMAN, *Secretary.*

Clinton County, Illinois

You can tell the world that the threshermen of Clinton County are organized, fully ninety-five per cent belonging to the county association, all of which will join the state association in the near future. This county has been organized since the sixteenth of April, 1917. We carry no fire insurance but we have a loss

agreement that every member signs and should there be a loss to any member of the association through any cause we agree to make such loss good to the extent of what such machinery is valued by the three nearest threshermen of the locality where such loss occurred, providing they find that the one who had the loss is a member in good standing. Our prices for the year 1919 were as follows: wheat, eight cents; oats four cents; rye, ten cents; peas and beans, seven cents per bushel. We also had a set price for all other work such as silo filling, husking, hulling etc. Wheat in southern Illinois is almost a total failure this year; more than two-thirds will be plowed up, that is, if the farmers can get help at a price they can afford, otherwise most of this land will not be put in at all, but lay idle.

H. A. HEMPEN, *Secretary.*

FARMERS' BANK OF DURHAM.

Durham, Missouri, April 16, 1920

THE CLARKE PUBLISHING CO.,

Madison, Wisconsin.

Gentlemen: Albert Smith, of this place, has handed me a letter that you wrote him on April 5, 1920.

The threshermen of northeast Missouri are, as a class, substantial good citizens, in most instances being land owners, and on account of up-to-date business methods they are accorded the same accommodations as any other class of business. In fact, the bankers rather seek the threshermen's credit business. We have been dealing with them extensively for the last fourteen years and have found them always prompt and trustworthy, some of our very best citizens are threshing machine men.

Very respectfully,
J. R. JOHNSON, *Cashier.*

Kentucky Threshermen's Association

Right now is the time for me to express myself in regard to a publication that has come out recently from Chicago in pamphlet form regarding a proposed uniform vehicle law. It is not possible for all threshermen of this country to read this little book so we want to get others acquainted with what is going on.

The committee that favors the proposed law is from the manufacturing districts, and from automobile clubs, and not one member from the producing districts or farming centers. It it were not for the American farmer and thresherman, where in the world would the autoist get his bread? The American people cannot live on the fumes of gasoline or from the tooting of the horn from the passing tourist. We are not trying to throw any obstruction in the wheels of manufacturing and we do not want any obstruction thrown in the wheels of production such as they are trying to do.

Old Kentucky is ready now to launch a fight against such proposed legislation. I will go on record as saying every farmer and operator in this state is against any such proposed unjust and radical legislation. The great cry at this time is for more production. Population is increasing, production is decreasing. If such things are allowed to go on unchecked, no telling where they will end.

JOSHUA BOHANNON, *President.*

Iowa Threshermen Please Take Notice

During our convention in Des Moines on March 10, this year, the members of the association voted to organize our own business companies, both compensation and fire.

Organizing a mutual insurance company, when you have some laws to contend with, is some job and takes some time. I am taking this opportunity to let you know that it will not be possible for us to perfect the organization in time to do an insurance business this year; for the protection of our men and your own interests and safety, you better obtain insurance in some other reliable company for this year; and we will effect the organization of our own company as soon as possible under existing conditions. We hope to be able to better conditions before the next convention.

AUGUST W. LEMBKE,

Secretary-Treasurer.

New Brotherhood Organizations

The National Association of Brotherhoods has been for several months planning for the organization of Brotherhoods in the states of Delaware, New Jersey and Missouri, and for a revival and reorganization of the already existing association in the state of Maryland, which was organized some four or five years ago and has been almost entirely inactive up to the present time.

At the request of the National Association, a meeting was held in Harrisburg, Pennsylvania, in the latter part of February for the purpose of arranging plans to form an organization in the states of Delaware and New Jersey, and to revive and reorganize the one in Maryland. This meeting was attended by J. A. Rose, secretary of the Pennsylvania Association, and Harry Kellogg, publicity manager of the New York Brotherhood, both of whom are directors in the National Association of Brotherhoods of Threshermen, J. B. Parker of The American Thresherman and Farm Power and representatives of the Frick Company, Waynesboro, Pennsylvania, and the A. B. Farquhar Company of York, Pennsylvania, and of practically all the other thresher manufacturers doing business in the territory covered by the three states above mentioned.

This Expert Lives in Your County



INTENSIVELY trained by our educational course, all representatives of the Milwaukee Air Power Pump Co. are experts, well able to install running water and electric lights.

Our representative in your county is trained to make one engine supply water, and at the same time run the electric lighting plant.

He is trained to pipe water directly from the well and cistern to your farmhouse, barn, lawn, watering trough, and dairy, and to replace the old kerosene lamp with electric lights. No storage tank or stale water.

He is trained to put hot or cold running water in your kitchen and bathroom; fresh drinking water in your house; pure water for your stock; water in your barn for your cows; electric lights anywhere on the place.

He has been trained. And it costs nothing to consult him. If, after questioning him and hearing his expert advice, you want the Milwaukee water or light system, he'll do the job right and thereby increase your farm profits.

We have a representative in your county. If you don't know him, write us.

MILWAUKEE AIR POWER PUMP CO., 906 3rd St., Milwaukee, Wis.



Dates were agreed upon for meetings according to the following schedule:

An organization meeting for New Jersey, to be held at Trenton, April 5.

An organization meeting for the state of Delaware, to be held at Dover, April 6.

A reorganization meeting for the state of Maryland, to be held at Easton, on the eastern shore, April 8.

A reorganization meeting, to be held at Frederick, Maryland, on the western shore, April 10.

These meetings were held according to the schedule arranged. The one at Trenton, New Jersey, was held in the Republican Club Auditorium and a complete state organization was perfected. There was a good attendance of thresherman and a good representation from the concerns doing business in that state. The following officers were elected: president, W. R. Runkle, Trenton,

N. J.; vice-president, George Hohl, Allentown, N. J.; Secretary and Treasurer, S. C. Coder, Trenton, N. J.

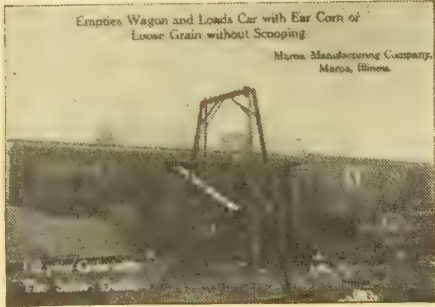
They voted to become members of the National Association of Brotherhoods of Threshermen, and Mr. S. C. Coder of Trenton, New Jersey, was made a director in that association.

Almost immediately upon the adjournment of the meeting at Trenton, meetings were arranged for both the northern and southern end of the state. These meetings doubtless will be well attended, and New Jersey bids fair to become one of the well organized states in the National Association.

The Delaware meeting was held in the Court House, one-half block distant from the Capitol Building in Dover. It was an exceedingly well-attended meeting, having among its number three ex-members of the

state legislature. Matters of considerable importance to the threshermen were pending before the state legislature at the time of this meeting, and a splendid opportunity was at hand to see the immediate results of organization work. The following officers were elected: president, B. B. Bowden, Seaford, Delaware; vice-president, Harry H. Hance, State Road, Delaware; secretary-treasurer, Walter Geist, Newark, Delaware.

The group of threshermen who met in this organization meeting were a most excellent group of men, and if we mistake not, the state of Delaware will be heard from regularly in the organization work from this time on. They became members of the National Association of Brotherhoods of Threshermen, and Walter Geist of Newark, Delaware, was made a director in that association.



The photo shows a Boss Air Blast Portable Car Loader and Crib Filler loading a railroad car with ear corn without any scooping from the wagon or in the car. It handles loose grain equally as well. It is a paying proposition for a threshing run, as granaries can be filled without scooping. Compact, low down and easily hauled about. Requires little shed room. It cannot injure the tenderest grain, for the grain does not pass through fan. Farmers also use it for filling cribs on the farm with ear corn. It has distinct advantages over the ordinary "corn dump." Easily operated by a tractor. Write today for our booklet, "Good Bye Scoop." It will pay you to get it for your farmer customers to look over.

MAROA MFG. CO., Dept. T., MAROA, ILL.
Established 1900

Mention The American Thresherman and Farm Power

"Good-Bye Scoop"

You can load railroad cars and fill cribs with ear corn and loose grain without using a scoop.

Two reorganization meetings were held in the state of Maryland, one on the eastern shore at Easton, and one on the western shore at Frederick.

The meeting on the eastern shore was held in the Court Room in Easton, and delegates were appointed to attend the meeting at Frederick on Saturday, April 10, when the reorganization of the Maryland association would be completed.

The meeting at Frederick was held in the Y. M. C. A. Auditorium and was well attended. The purposes of the meeting, to reorganize and elect new officers for the Maryland Threshermen and Farmers' Protective Association, had been fully stated in the various announcements that had been sent out, both to members and non-members of the old association.

The meeting was called to order and the purposes fully stated, and was confirmed by unanimous vote of those present. The following officers were elected: president, Geo. E. Nicholson, Olney, Maryland; vice-president, Chas. D. Oland, Adamstown, Maryland; secretary, Wm. H. Renn, Frederick, Maryland; treasurer, C. W. Harp, Myersville, Maryland.

Mr. C. B. Rice of Trappe, Maryland, on the eastern shore, was appointed as a member of the executive committee from that part of the state. Two other members of the executive committee are to be appointed from the western shore. They became members of the National Association of Brotherhoods of Threshermen, and Mr. Geo. E. Nicholson of Olney, Maryland, was made a director in that association.

Harry Kellogg, publicity director and chairman of the legislative committee of the New York Brotherhood of Threshermen and a director in the National Association of Brotherhoods of Threshermen, J. B. Parker of The American Thresherman and Farm Power, W. H. Newsom, president of the National Association of Brotherhoods of Threshermen and a number of representatives of thresher manufacturers doing business in the three states above mentioned were present at all of these meetings.

A full explanation of the organization work in other states, what has been accomplished and what may be accomplished by the state organization, what has been accomplished and what remains to be accomplished by the National Association of Brotherhoods of Threshermen was made at every meeting. These things are all of vital interest to the threshermen of Delaware, Maryland, and New Jersey at this time, and all of these organizations are now in a position to accomplish for their own states what the organizations have accomplished in other states.

Several weeks ago Mr. Albert

TIRE PRICES REDUCED

6000 MILES GUARANTEE



National GOOD-WEAR Double-Tread Reconstructed Tires represent quality, value, service and satisfaction, and are guaranteed for 6,000 miles. Our tires do away with tire trouble. The fact that we have over 30,000 satisfied customers speaks well for the wearing qualities and enduring powers of National GOOD-WEAR Tires and Tubes.

Reliner FREE with Every Tire. Tubes Guaranteed Fresh Stock.

Size	Tires	Tubes	Size	Tires	Tubes
30x3...	\$5.50	\$1.60	34x4...	\$8.75	\$2.40
30x3 1/2...	6.50	1.75	34x4 1/2...	10.00	3.00
31x3 1/2...	6.75	1.85	35x4 1/2...	11.00	3.15
32x3 1/2...	7.00	2.00	36x4 1/2...	11.50	3.40
31x4...	8.00	2.25	35x5...	12.50	3.70
32x4...	8.25	2.40	36x5...	12.75	3.65
33x4...	8.50	2.50	37x5...	12.75	3.75

Send \$2 deposit for each tire and \$1 for each tube ordered, balance C. O. D. Tires shipped subject to your examination. State whether S. S., C. L. (Q. D.), plain or N. S. is desired. All same price.

NAT'L GOOD-WEAR TIRE & TUBE CO.
1113 Washington Blvd., Dept. 532, Chicago, Ill.

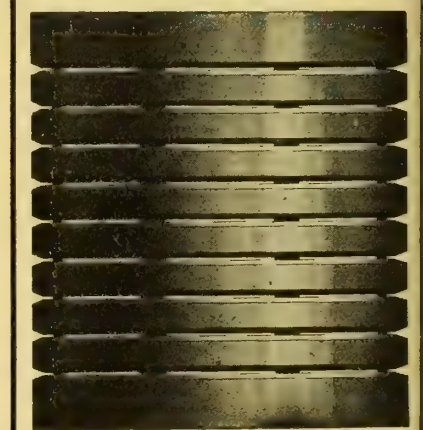
How to Increase Your Crops And save them from drought EVERY YEAR.



THIS BOOK TELLS HOW
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Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures crops, especially POTATOES.

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No More Leather Covers or Belt Dressing

When you are getting your rig in shape for this season's threshing, why not put on a Vacuum Non-Slip Pulley and forever do away with expensive leather covering and belt dressing?

The Vacuum Non-Slip Pulley is made of cast iron, needs no covering, runs the separator up to speed, saves belt and power and is guaranteed to pull as well as a covered pulley—many users say it has practically no slip and pulls better and steadier than a covered pulley or any kind of pulley.

Why not write today for a circular fully describing this patent pulley and testimonials from users who have forever ended pulley troubles?

Vacuum Non-Slip Pulley Company

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STUDY AT HOME Learn Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address
Clarke School of Traction Engineering
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LOST—One Hundred Fifty Dollars!

By an INDIANA THRESHERMAN

Because he did not have a

QUICK REPAIR WASHER

Read His Statement

"It was during threshing. I had hired all the help available. Threshing was well under way when my machine choked. It proved that the fan had swerved into the housing. I lost 1 1/2 days' threshing. If I had had one of those WASHERS I would have been at least \$150.00 ahead."

A time saver. Easily applied. Comes in all standard sizes.

Prices and sample mailed upon receipt of 20c to cover postage and mailing.

DEALERS WANTED

QUICK REPAIR WASHER CO. 509 Occidental Bldg. Indianapolis, Ind.

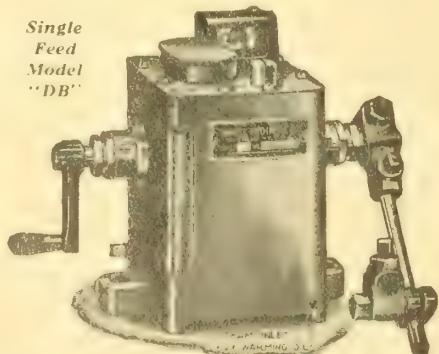
Mention The American Thresherman and Farm Power

Let Us Send You a Manzel Oil Pump On 30 Days' Trial

WHEN you receive it, put it on your engine and use it for thirty days. Try it in cold or warm weather, using heavy or light oil—against high or low pressure—running fast or slow on the road or standing still. Keep account of the small amount of oil you use—notice how smooth your engine runs. Use it with the feed cut down or at full capacity—try the hand attachment. Give it every reasonable kind of test. If you are not satisfied after thirty days' use that it is the most economical and reliable Oil Pump you have ever used, send it back at our expense.

The Feed Is Always In Sight

The "Manzel" is the sight feed oil pump, and you can see at all times just how much oil is being fed into the cylinder of your engine. You can stand thirty or forty feet away and count the oil drops as they are being supplied. There is no guess work about a "Manzel" Pump, and it will reduce your oil bills 30 to 60%. Furnished Right or Left Hand—Any Number of Feeds. Write today for catalog.



MANZEL BROS. COMPANY

311-313 BABCOCK ST.
BUFFALO, NEW YORK

J. J. Langmack, General Agent for Washington, Oregon and Idaho, 213 Gerlinger Building, Portland, Oregon

nith of Durham, Missouri, was duced to take up the organization ork in that state. He entered into is work very enthusiastically and a very effective way. He secured ie coöperation of the representative every threshing machine concern oing business in that territory, ex- pt one, who, we are sorry to say, ook a position opposing all thresh- men's organizations, because he elieved they were going to benefit omeone's condition. Most of the oncerns supporting the organization ovement in Missouri sent out hun- dreds of announcements of the meet- ing to be held in Macon, and we are leased to say that the one repre- sentative's antagonistic attitude did ot in the least detract from the suc- cess of the Missouri meeting which as held in Macon, April 19, 20, and 1.

This was one of the most successful rganization meetings we have had he pleasure to attend, and was full f interest during the entire three lays. The hearty coöperation of all oncerns doing business in that terri- tory, excepting as above mentioned, is certainly recognized by everyone ttending that meeting, and most of hem had representatives present.

Mr. Joshua Bohannon, president of the Kentucky Brotherhood of Threshermen and a director in the National Association, the writer of his article as president of the Na- tional Association of Brotherhoods of Threshermen and J. B. Parker of The American Thresherman and Farm Power also attended this meet- ing. The various activities of the other state organizations and of the National Association were fully ex- plained, and the need for an organi- zation in the state of Missouri as strong and as active as in other states was fully recognized.

The name adopted was that of the Missouri Brotherhood of Thresh- ermen, and the splendid list of officers elected is as follows: president, J. D. Bannister, Monroe City, Missouri; vice-presidents, Rufus Palmer, Co- lumbia, Missouri; W. A. Goodrich, Molena, Missouri; C. E. Taylor, Trimble, Missouri; A. W. Lake, Durham, Missouri; secretary-trea- surer, Albert Smith, Durham, Mis- souri.

This meeting voted that Missouri should become a member of the Na- tional Association of Brotherhoods of Threshermen and designated Al- bert Smith of Durham, Missouri, as director and representative for that state, and we are sure that the state of Missouri will be frequently heard from in an organization way from this date forward.

To sum up the whole of the organ- ization meetings in the three states of Delaware, New Jersey and Mis- souri and the reorganization meet- ings in Maryland: they have been most successful, and add a total

membership to the National Associ- ation of Brotherhoods of four states.

At a regular meeting of The On- tario Brotherhood of Threshermen held at London, Ontario, March 2 to 4, it was unanimously voted that The Ontario Brotherhood of Thresh- ermen also become a member of the National Association of Brother- hoods. The Ontario Brotherhood of Threshermen is the strongest Threshermen's Organization in Can- ada, and the National Association of Brotherhoods is glad to welcome it to membership in its association along at the same time and with our own states of Delaware, Maryland, New Jersey, and Missouri, making a total in all of five new members in the National Association of Brother- hoods of Threshermen.

W. H. NEWSOM, *President.*

National Association of Brother- hoods of Threshermen.

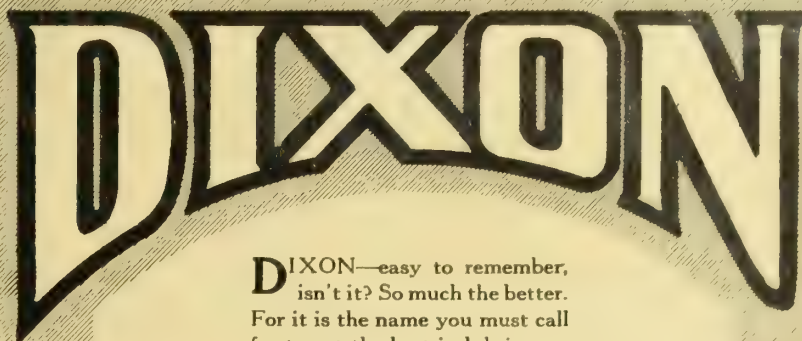
Straight from the Shoulder

The following is taken from an address by O. M. Peters of the Emerson-Branting- ham Company at the convention of the Indiana Brotherhood.

It is not the good fortune of every one to be able to get up and make eloquent and interesting talks, such as you have listened to, and such as you will hear from the men who follow me. However, I am not a very great believer in excuses, as we all can do our best, and when I stop to consider, you are in a worse position than I am, for you have to listen to this.

It is no more than proper to ask ourselves, why are we here attending this meeting? The answer, I think, is to benefit ourselves and the business in general, as well as have a little pleasure. Both reasons are sound. One cannot stand still these days, he must either go forward or go backward and as for the pleasure end of it, I am a great believer in the old saying, "All work and no play makes Jack a dull boy." Let me try to bring out a few points that have oc- curred to me, basing same of course, on a manufacturer's standpoint.

In the first place, do you know what it costs you to run your rig? If you don't, you better find out for it is hazardous business when you do not know your costs. Don't let the other fellow set your price for the work you do. If he wants to run his rig so that he does not make a fair profit, that is his business but no reason why you should do the same thing. Two wrongs do not make a right, you know. Your investment is so much and, by the way, you should figure it at its present replace- ment value. Labor, repairs, in- surance, interest, taxes and deprecia- tion, amount to so much. By the way, I do not think that about ten per cent is very far wrong on that item. Also, do not forget to allow yourself average daily wages. You would not work for anyone else for nothing, so



DIXON—easy to remember, isn't it? So much the better. For it is the name you must call for to get the best in lubricants.

It is a name that represents nearly one hundred years of experience in the manufacture of lubricants—Graphite products, to be sure.

Dixon's Graphite Lubricants are recommended for trucks, tractors and automobiles. They give thorough protection to all frictional surfaces, especially to the parts where the heaviest strain of service falls. They keep your machinery in first-class running order.

Try Dixon's Graphite Cup Grease No. 3 for cups, axles and steering gear; No. 677 for enclosed gears; Motor Graphite for the engine; Dixon's Solid Dressing for the belts. You'll be served better.

These are only a few Dixon products. The Dixon line covers every lubrication requirement. Write for Book- let No 22-TG, "Tractioneer's Guide to Good Lubri- cation."

Made in Jersey City, N. J., by the

JOSEPH DIXON CRUCIBLE CO.

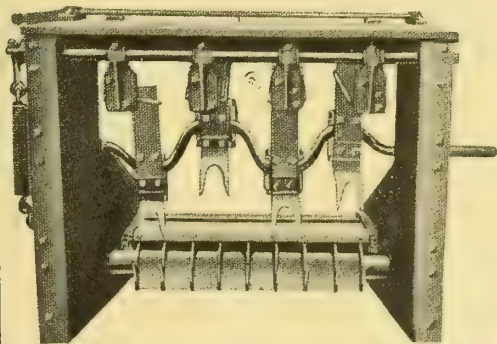
Established 1827



Mention The American Thresherman and Farm Power

The STEWART

Here's the sensible solution of your feeder problem—a real self feeder that we know will give you complete satisfaction.



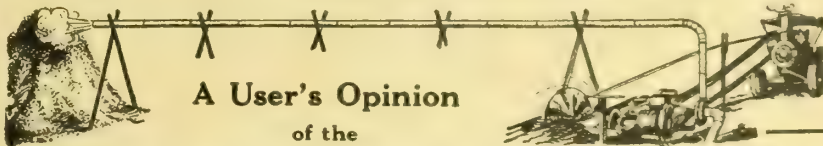
Stewart Self Feeder Company, 1068-70 Union Ave., Kansas City, Kansas

Its principle of feeding is a duplicate of hand feeding, straight down, but the speed quite different—1,000 forks per minute.

The Stewart Company is now in new and enlarged quarters made necessary to facilitate the growing demand for Stewarts.

There are three sizes—20x24, 28x32 and 36x40. Prove your- self a good judge by getting a Stewart. Our Catalog is free.

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CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower. as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs.

Yours for business,
C. S. LONG, New English, Iowa, R. D. No. 1. Box 40.

The letter explains itself. This man's blower has worked unfailingly for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO

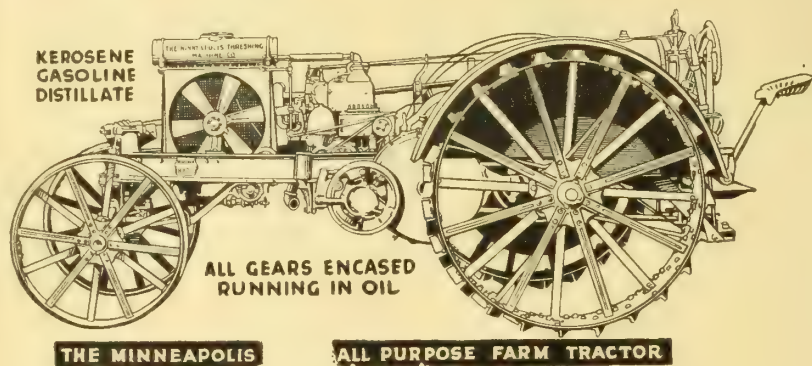
Reliable

Durable

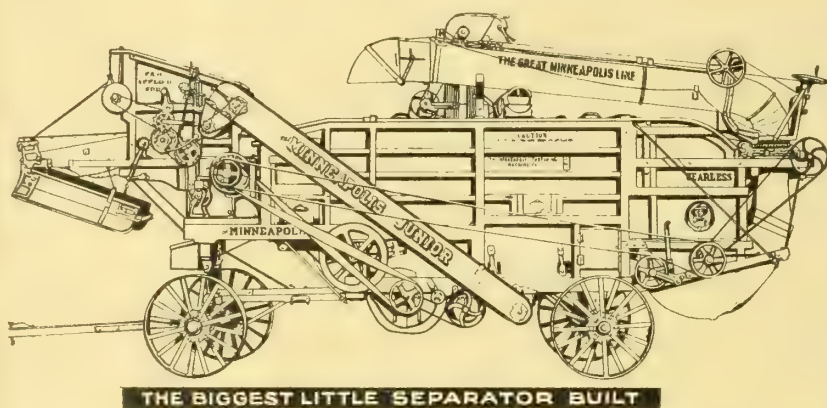
POWER

Economical

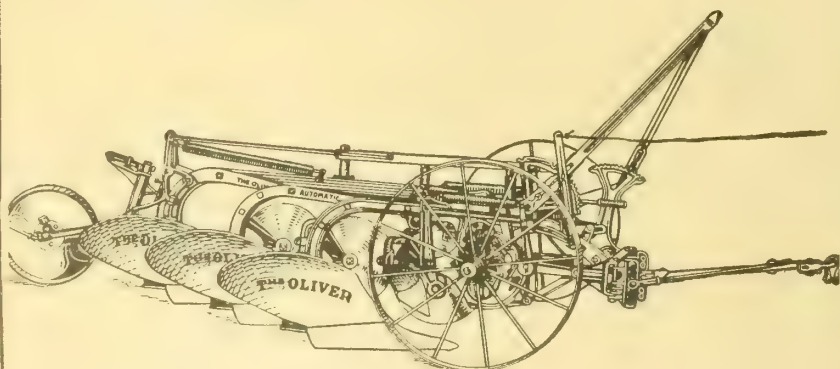
Efficient



You can depend on the Minneapolis All-Purpose Tractor to perform your heavy spring plowing, discing and seeding. You will find it an untiring worker during harvest time and a good steady power for various belt jobs. A new folder is just out giving all dimensions and details of construction. The price now is \$1325.



The Minneapolis Junior can be furnished with drag stacker and hand feeding attachment, but the small tractors handle it very nicely with all the labor saving attachments. It has wonderful capacity—light draft and "It Saves the Farmer's Grain." Three sizes for 1920—24x36—24x42—28x42.



Oliver Mold-board or Disc Plows and Tractor Disc Harrows are known the world over for the good work they do. We sell them.

The Minneapolis Threshing Machine Co.

Hopkins

(West Minneapolis)

Minnesota

Builders of

"The Great Minneapolis Line"

Steam and Gas Tractors—Grain and Rice Threshers

Mention The American Thresherman and Farm Power

why should you do it for yourself. Do the work for Mr. Farmer at a fair price but do not let him tell you what it should be as you are competent to run your own affairs. Do you remember when you received about three cents per bushel for threshing wheat? Mr. Farmer got about eighty-five per bushel for it then. Last year he received in the neighborhood of \$2.20 so that on the same basis he should have paid you about seven and three-fourths cents per bushel for threshing it. Did he do it? One thing sure, he will not back you in a corner some place and make you take that much. You have to ask him for it and when you figure it out for him, you will not find many that kick. Of course, a few will say it is too much and raise a kick, but you must remember that some people would kick if they were going to be hung. It takes a few "kicks" to make us appreciate some of the good things, just like it takes a few fleas to keep a dog from forgetting he is a dog. In any business, the price you get for your material or your work spells either success or failure so too much importance cannot be given this subject.

Go over your rig early in the year and find out just what repairs you will need. If you wait until a week or two before you start threshing, no company under high Heaven can give you the service you expect, and the kind they would like to give. We must all depend upon the railroads in one shape or another for our machinery and repairs, and so do not fail to get your orders placed a long time before you need the material. Better have your machines and repairs two months before you need them than to have to wait a single day when you are ready to go to work. The average manufacturer tries to look into the future and have plenty of stock on hand but you can certainly help him and yourself at the same time, by ordering early. If you expect to place your order for a new engine or separator, it would work out in the end to your benefit if you decided this matter during the winter months. When the manufacturer knows approximately the number and sizes of engines and separators that his trade will require, he can figure intelligently with his production department and those things all help to reduce costs and you get the advantage of it. You know if you wait until just before you are ready to start work, to place your order, you will more than likely find that the factory is sold out on that size, especially under existing conditions when it seems almost impossible to get regular deliveries on raw material, and what is the result? You have to wait and more than likely pay a higher price than you would if you had bought early. There would be just as much reason

in your waiting to fire up your engine until the first load of wheat was alongside the separator. Don't lose sight of the fact that our interests are mutual. We could not get along without you, and you would certainly miss us, at least.

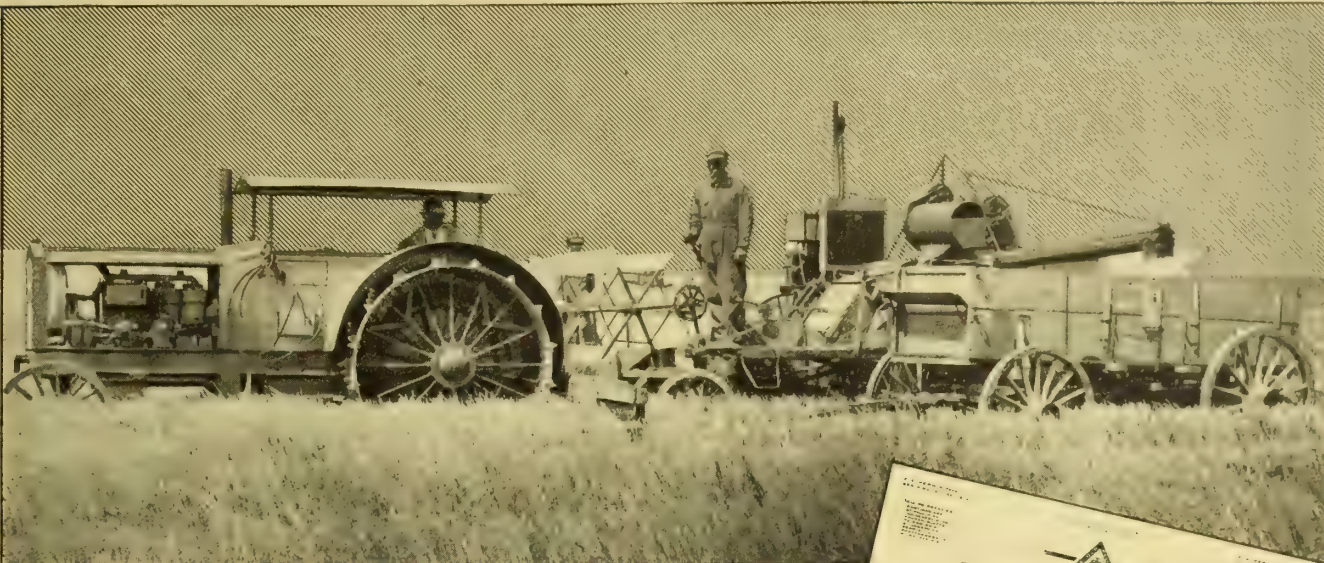
Why would it not be a good plan to make up your list of customers before you start work? Don't take on so many that you cannot give them good service. Know just who you are going to thresh for and do their work first. A satisfied customer is what counts anyway. Mr. Farmer likes to say to himself that he does not have to worry, for Bill Jones is going to do his threshing and he knows that it will be done right. Any business would go broke if it had to depend upon doing work just once for its customers. The repeat orders are what count.

When you make a price for your work, stick to it. Don't let some fellow tell you "John Jones will do it for one cent a bushel less." Possibly he told John Jones the same thing about you. I know it is human nature to think that if John Jones can do it for so much, you can, but it is poor business. Are you in business to let John Jones set your price, or to make some money? If you can't make any money in the threshing game, for goodness sake get out of it and into something that you can. If this same farmer who tries to beat you down on your price had some land to sell, do you think you could buy it for fifteen dollars per acre less by simply telling him that one of his neighbors would sell at that price? Certainly not, he would soon tell you to go and buy your land of said neighbor.

The subject of collecting for your work is a very important one. How many days have you put in at the end of the season trying to collect the money for the work that should have been paid for when you finished threshing? Those days are worth money to you. If you were not out collecting, you could be doing something else that would earn you money, you know. It is hard enough now to earn a day's wages without having to put in another day collecting it. Who is to blame for this condition? I think you are. Too many of you are afraid to ask Mr. Farmer for what is justly due you. Remember, the money he owes you for threshing is yours. You earned it and certainly don't need to apologize for asking him for it. Chances are that he did not let you do his threshing anyway just because he liked you but because you could do his work right and when he wanted it done. If you owed Mr. Farmer a few dollars, do you think he would be at all backward in asking you for it? I need not answer that question. Most any machinery company or your trade paper, The American

thresherman and Farm Power, will wish you with an account book so when you are through threshing, you can figure out the exact number of bushels and the amount the bill before you pull out of Mr. Thresher's yard. When this is done, have him either pay you then or set the date when he will pay, and, if the other, have him sign a statement to that effect. It won't hurt if this so-called "statement" is sometimes signed as a note, and if he wants any part of time, interest at the legal rate will help you some. You can't tell your hired men "promises" on Saturday night, you know. I think the man who pays you when the work is finished is entitled to a discount, for you get the use of your money and that is worth something. I will find that lots of your customers will pay you on the spot. You make it an object for them to do so and those who follow that plan are entitled to a better price. Talk it over with all the threshermen in your territory. If you all decide to follow that plan, you can put it into effect. What if one or two of your customers do get a little bit "behind?" They will get over it all right. Ask them if they would sell their farm or some of their stock, and simply wait for their money until you got good and ready to pay them, and without interest, too. Remind them of the fact that their time is not worth twenty-five cents a bushel until your threshing rig comes in and threshes it. No danger of them going back to the flail in order to beat you out of their work. I don't get scared about those "company rigs." Many a good thresherman has been beaten down on his price by that threat. You know Germany told us we could not beat out soldiers across the Atlantic, if we tried it, she would sink our ships with her submarines. It was a good bluff, but did it work? You know the man who says "It can't be done" never does much. It takes the man who says "I'll do it" to put it across.

Do not expect too much of your machinery. Your engine and separator were built to do good work and they will do it, if you give them half a chance. Go over your rig every night and see that it is in shape to start work the next morning. It is easier to keep out of trouble than it is to get out, you know. If something goes wrong, do not begin to damn the machine and the manufacturer who made it. The men who build machines are human you know, and they sometimes make mistakes, just the same as you do. The manufacturer is a whole lot more interested in seeing his machinery do good work and please you, than you are yourself. With you it is just one machine, and with him it means hundreds of them and he fully realizes that they



Makers of the RUSSELL Tractor
always feel safe in recommending

Dixie

Years ago The Russell & Company, established in 1842, earned a reputation as manufacturers of "The Old Reliable Russell Line" of engines, threshers, saw mills, etc.

Reliability having been the one outstanding characteristic upon which the Russell reputation was built, this company chose the DIXIE Magneto as standard ignition equipment on the Russell Kerosene Tractor.

That the DIXIE has lived up to its own reputation for dependability and more than satisfied expectations in upholding the Russell reputation for reliability, is shown by their letter.

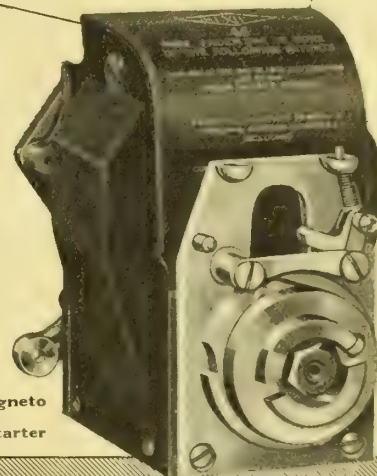
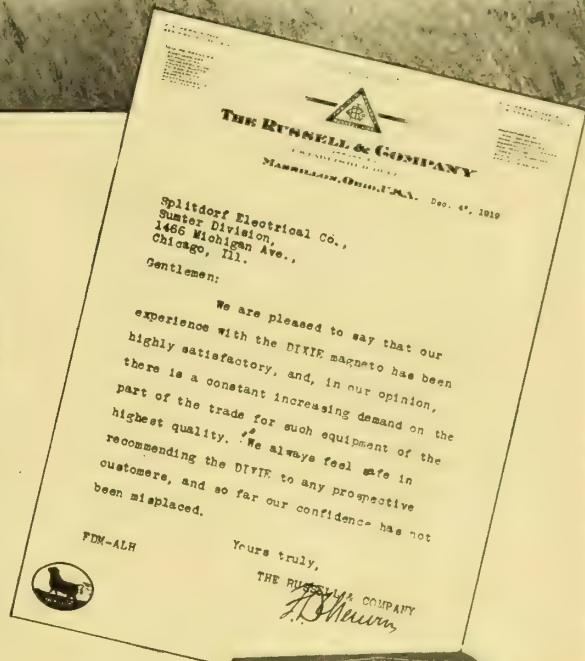
The dependability of the DIXIE will insure the efficient operation of any internal combustion engine—that of your truck, your tractor, your pumping equipment or your lighting plant.

SPLITDORF ELECTRICAL CO., Newark, N. J.
Sumter Division: 1466 Michigan Ave., Chicago, Illinois



The Plug With the GREEN Jacket

Your dealer can supply you with type best suited to your automobile, truck or farm engine. Our booklet will tell you exactly the right type for YOUR engine. Write for it TODAY.



DIXIE Magneto with Impulse Starter



Mention The American Thresherman and Farm Power

must do the work right if properly operated. I have told many a man in my office that we can sell him a machine that will do good work if properly operated, but we cannot sell the brains with which to run it. When you write a manufacturer for a catalog, do not be afraid to tell him that you are figuring on making a change. The average salesman now does not try to get you into a corner and make you think "black" is "white." He talks his own line. He don't knock the other fellow. If he does start knocking some par-

ticular make of machinery, just make a note in your book to look that particular line over. He must be afraid of it or he would not say anything about it. A salesman, who knows his business, can take up plenty of your time talking about the line he is selling, without throwing any clubs at the other fellow. You remember that old saw, "You always find plenty of clubs under a good hickory tree." It is mighty true. For ourselves, we have always found our competitors pretty decent sort of fellows. Sure, they are after

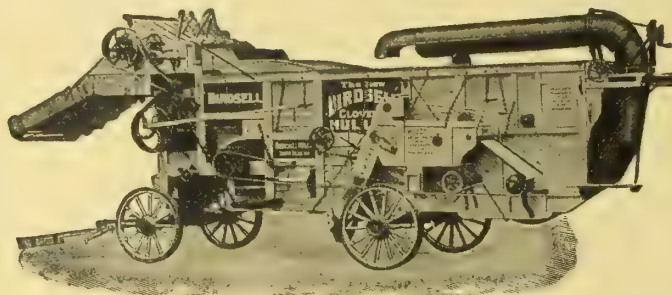
the business. That is all right and I have told many a prospect that if he likes some other make of machinery better than ours, that is the one for him to buy. We can't take care of all the business anyway and will try and get our share on a fair and square basis. I think it is only good judgment on the part of a man who is in the market, to look them all over and then do his own deciding. The average thresherman now does not need anyone to tell him what to buy. He does his own deciding. "Look at the article and

BUY EARLY—AVOID DISAPPOINTMENT

THIS IS GOOD ADVICE ON ANYTHING YOU'LL NEED
INCLUDING BIRDSSELL CLOVER AND ALFALFA HULLERS

LABOR AND MATERIALS

Owing to the great shortage of labor it is impossible to speed up production to the maximum of the pre-war period. This means an unavoidable loss to the country at large. Even if labor were available as in pre-war days our raw materials cannot be produced as rapidly as in the past. Quality goods are hard to get but we prefer to do less business and produce the article of highest quality.



BUILT IN TEN SIZES

Birdsell Clover and Alfalfa Hullers are built to suit conditions everywhere. They are used throughout the world. They have made themselves standard everywhere by their performance in the field. Ask the Birdsell owner in your own neighborhood.

SUPPLY AND DEMAND

The supply is of course insufficient in every line, while the demand is greater. During the war people bought less, only what they were compelled to have. Now they are striving to purchase for all their requirements in every line. Every manufacturer is deluged with orders he cannot fill. The buyer who buys early will be most certain to get his goods. The demand is far greater than the supply. Order early.

BIRDSSELL MFG. CO., SOUTH BEND, IND.

INDIANAPOLIS COLUMBUS PEORIA ST. LOUIS KANSAS CITY MINNEAPOLIS

Mention The American Thresherman and Farm Power

not at the price," is a mighty good motto for we must all remember that, in the end, we get just what we pay for.

Let us all make our word good in our dealings with each other. If you buy a 20-horse power engine or a thirty-two-inch separator, that is what you expect the manufacturer to furnish you and you are right. On the other hand, when you make a deal and say you will do certain things, do them if it takes a leg. One of the things that has been a hard matter for the manufacturer to handle, has been collection expenses. I am glad to say that conditions are improving but they still could be better. You say in making your deal, you will pay a note on a certain day. All right, the manufacturer enters it on his books and figures that on that date he can count on your doing as you agreed, which, in turn, will enable him to pay certain of his debts. Oh, yes, the manufacturer still has debts and pay rolls to meet, just the same as you do. He gets so hard up at times that he hardly knows which way to turn. Now when he does not get your money on the day you said you would pay, what does he do? Waits a few days and then calls you up, writes a letter or sends a collector. Any of these mean time and expense. More than likely you were busy on the day the

note was due and you said to yourself, "I'll go in town one of these days and pay it, for I know a few days will not make much difference to the boys down at the office, as they know I am all right." Well, suppose two or three hundred of our customers do the same thing at the same time. Do you think it works any hardship on us? Never thought of it that way, did you? I sometimes think that when making a deal, about ten per cent should be added to each note with the written understanding that, if paid promptly when due, the ten per cent will be deducted, otherwise it would stand and then those fellows who took the additional time would pay for it. Certainly it is not right to make the man who keeps his word and pays on the due date, to help stand the expense of those who are simply careless. This may sound just a little bit hard but right down in your heart you know that I am right. I feel free in talking this way to you for we are all in the same line of business and our interests are mutual. The closer we can work together, the cheaper the manufacturer can build his machinery and the cheaper you can buy it.

I have now gotten some of the manufacturer's so-called troubles off my chest and hope I have given you something to think about. If you

have anything on your mind in which you think the manufacturer can help you, do not be afraid to say so. We are not thin skinned and are not perfect by a long shot, but if no one tells us of our faults, you know it may be a long time before we discover them as it is much easier to see faults in the other fellow than in yourself.

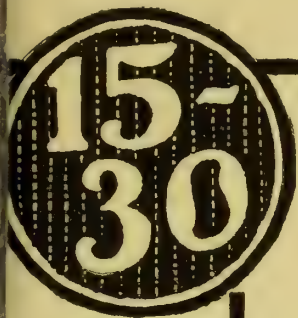
It certainly pleases me to see this fine attendance at your meeting. It shows that you appreciate the work that has been done by your officers. Right here I want to say that I do not think that any threshermen's association in the United States has more competent and efficient and hard working officers that you have. It is certainly up to you to give them your hearty support. Your membership in the Indiana Brotherhood should give you a feeling of pride. However, I was just wondering whether all the threshermen in your township or county belong to the association. If they don't, whose fault is it? Don't you think if you would appoint yourself a committee of one to see two or three of them and explain the many advantages they would secure by joining, simply mentioning those points that caused you to join, they would give you their application? Certainly they would. Right now you would be willing to promise to do that but will you

feel the same way about it when you get home? You know at a meeting it is easy to arouse enthusiasm but the kind that counts is the kind which lasts all during the year. I would not take so very much time of your part, and you have the time during the winter, so why not try it out. In the past two weeks I have secured three applications from men who were in my office, who did not belong to the Ohio Brotherhood. It did not take long to sell them, either and over in Ohio we have not quit all the advantages to offer them that you have. Try it out so that when you come to the convention next year, when you say "Hello" to the boys, you can tell them that you got four or five new members yourself. It will be a mighty satisfying feeling and will show your officers that you are supporting them. For myself and for my company, we are great believers in association work and stand ready to put our shoulder to the wheel whenever we can help you.

In closing, the thought comes to me that we are all pretty much alike and resemble the machinery we see and use, to a very great extent. There may be some few differences in construction, looks, etc., but all engines are built with the object of furnishing power and all separators with the object of threshing the grain, so that in the end the results are the same.

AULTMAN-TAYLOR

15-30 Kerosene Tractor



The All-Year, All-Job Tractor

NOT just a fair weather tractor—this famous Aultman-Taylor 15-30—but a **sturdy, rugged, all-year machine** that you can depend upon from plowing time to plowing time to put through any power job on your farm.

Aultman-Taylor 15-30

Are you using a 2-bottom plow? *Just add two more bottoms*, hitch up to your 15-30 and watch this powerful tractor pull through the job, leaving four clean-cut, evenly turned furrows behind. Or belt it up to your thresher. *There's a real test of belt power.* The 15-30 will easily handle the job, even with a 27-inch separator.

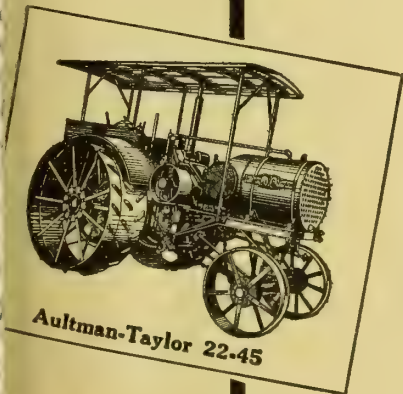
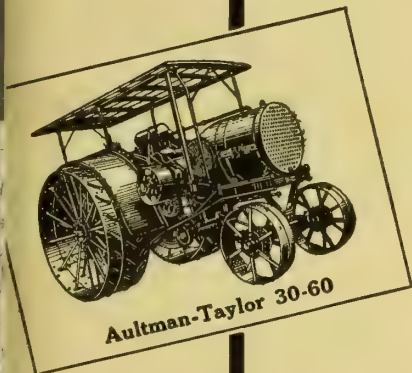
At belt or drawbar, the 15-30 has the power to "carry on" through any job on your farm, large or small—and do the work most economically.

The 15-30 Has a World of Power

The frame, built of 7-inch steel channels, is as strong as a steel bridge. Belt pulley is placed right to give a world of power—and it does. The final drive is through two large gears and the high, wide drive wheels insure easy traction and prevent packing.

The Aultman-Taylor 15-30 is the product of a firm which for 55 years has specialized in the building of farm power machinery. They build two larger size tractors, the 22-45 and 30-60, and the famous line of New Century Threshers.

See the Aultman-Taylor dealer in your town today. He will gladly talk over the question of whether the 15-30 is the tractor you need and why. Or write us direct.



The Aultman & Taylor Machinery Company

mansfield

Canadian Branches:



Portage La Prairie



Calgary

Ohio

Regina

Boys and Girls

What the Winds Bring

Which is the wind that brings the cold?"
"The north wind, Freddie, and all the snow,
And the sheep will scamper into the fold,
When the north begins to blow."

"Which is the wind that brings the heat?"
"The south wind, Katy; and corn will grow,
And peaches redden for you to eat,
When the south begins to blow."

"Which is the wind that brings the rain?"
"The east wind, Arty; and farmers know
That crows come shivering up the lane,
When the east begins to blow."

"Which is the wind that brings the flowers?"
"The west wind, Bessy; and soft and low,
The birdies sing in the summer hours,
When the west begins to blow."
—E. C. Stedman.

All-the-Year-'Round Garden Family

ELLEN EDDY SHAW.
Curator, Brooklyn Botanic Garden

Ally, Di, Sonny, Johnny and William. It is lovely to have a big family isn't it? The summer flower family is a great big family, oh, so much larger than just the few children of the other seasons. I think any boy or girl can see why it is easier to have a big family in summer. It is because then you can keep them all outdoors, and in other seasons of the year you have to have the children in the house. You know how it is!

Now, who are these children called Ally, Di, Sonny, Johnny, and William? I will tell you all about them. Ally is the nicest little girl you ever saw and never causes any trouble. Mother buys you a small package of dwarf sweet alyssum seeds, as sweet alyssum is our little Ally, and you place the seeds one by one about an inch apart, and one-half an inch deep in your garden bed. By and by up will come little plants, and they will grow about six or eight inches high. In five or six weeks Ally will have a white blossom just like a little white head.

When it gets toward the middle of the summer, give Ally a hair cut. Cut little Ally down within two inches of the ground and what do you suppose will happen? She will come up again and will have her same little white head all through the fall!

Who is Di? Di is also a girl, but she is larger than Ally. Her long name is dianthus, and sometimes we call her pink. Di is an old-fashioned child. You plant the seeds of dianthus just as you did those of sweet alyssum, but dianthus grows much taller and has a pink blossom, or a white one, and smells as sweet as can be.

Sonny, sometimes called Sun-flower, has great big seeds. You pick one up very carefully and you plant it an inch deep in the ground, and you plant another one a foot away. By and by up grows this big, strong boy, and later on in the summer Sonny has a yellow head—a huge yellow head with a Dutch hair cut. Now just you watch and see!

Johnny is a different kind of boy from Sonny. He is a quick little chap, sometimes called little "Johnny-Jump-Up," and by some people called Pansy. But I like the name of "Johnny-Jump-Up" best, don't you? Ask mother to buy you some pansy plants and as they blossom, pick the blossoms as fast as you can because then you will have more and more. I think "Johnny-Jump-Up" is one of the smartest of our children.

We have one child left in our summer flower-family, William. Sweet William is a slow boy. He is so slow that he generally refuses to have any

These Books Will Save You Time, Trouble and Expense

Everything pertaining to the Auto, Tractor and Gas Engine is thoroughly explained, with hundreds of illustrations, charts, diagrams, etc. Be the Man Who Knows; think what this is worth to you.

Practical Gas and Oil Engine Handbook, leatherette	\$1.75
Automobile Ignition, by H. P. Manly, leatherette	2.00
Automobile Starting and Lighting, leatherette	1.75
Farm Mechanics, 250 pages, 300 illustrations, cloth	1.25
Farm Engines and How to Run Them, cloth	1.25
Traction Farming and Traction Engineering, cloth	1.50
The Ford Motor Car, Truck and Tractor, leatherette	1.75
Starting and Lighting Troubles, Remedies and Repairs, leatherette	3.00

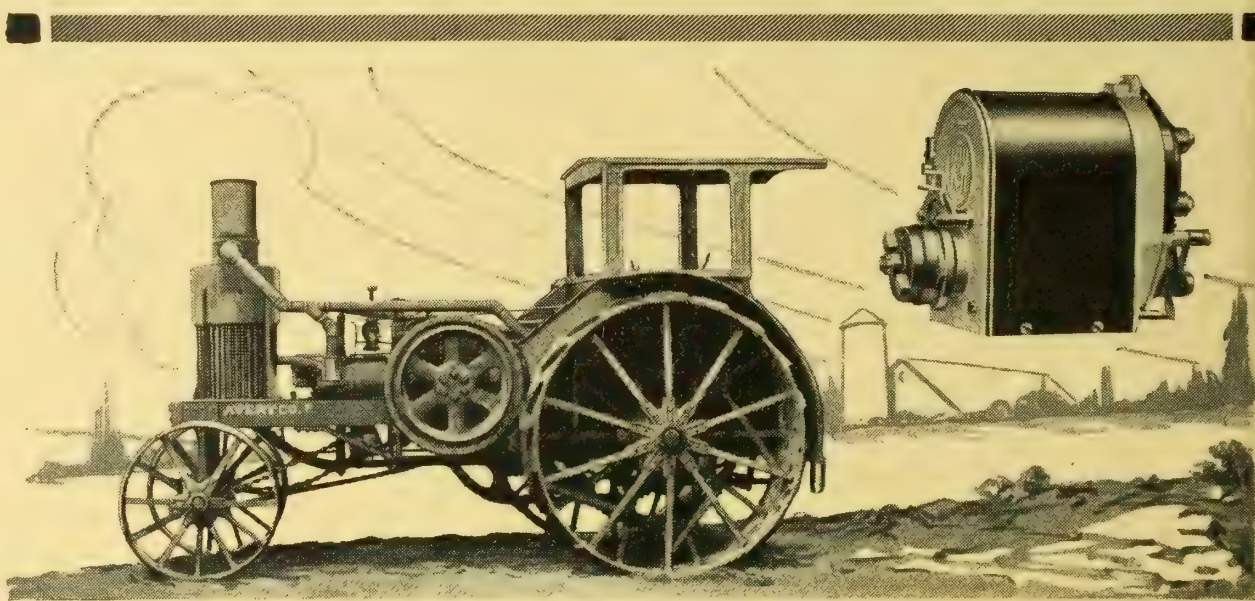


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FREDERICK J. DRAKE & CO. 1044 S. Wabash Av. CHICAGO



READ this leaf from the tractor experience of Frank Gerry, St. Charles, Minnesota, who bought the first Avery Tractor back in 1911.

There are thousands of tractor owners like Mr. Gerry who would be just as surprised and enthusiastic if they once tried a K-W Magneto—because it is specially designed for tractor service.

The first tractor manufacturers had much to contend with. The Avery Co. early appreciated a magneto specially built for tractor work—became one of our first customers and have used K-W Magnetos continuously.

If your tractor is not working right—try Mr. Gerry's plan—ask us to equip it with a K-W Magneto.

THE K-W IGNITION CO.
2837 CHESTER AVE. CLEVELAND, OHIO, U.S.A.



Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop

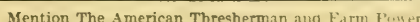
The Story of Ignition On The First Avery

"I bought the first Avery Gas Tractor that they sent out in the fall of 1911 and used it till the fall of 1919, when I sold it and bought a new 25-50 Avery.

"My first tractor was equipped with an Magneto when I got it and it did such unsatisfactory work that the company replaced it with a, which did very well, but was of such delicate construction that it failed to stand up to the rough usage a Magneto gets in tractor service and was replaced with a

These outfits did what I supposed was good work until I bought a small tractor for field work equipped with a K-W High Tension Magneto, and after operating it a few days, I got a K-W Model TK Magneto and put it on my Avery rig, and in all the time I ran it, it never failed me once starting or in running under any weather conditions.

"The 25-50 Avery I now have came equipped with a K-W Model HK and gives the very best service."



DIAMOND

h

p . . . l . . . lx

c

From h to lx is an inn.
From lx to c is an early flower.
From c to p is a fastening.
From p to h is part of a house.
From h to l (center) is a mean house.
From c to l (center) is courteous.
From p to l (center) is danger.
From lx to l (center) is lawful.

- FIVE BIRD FLOWERS
1. A tall flowering stalk, a Christmas bush, and the chicken's terror.
 2. An early bird and a goad.
 3. A large black bird and twelve inches.
 4. A large domestic bird and sour berries.
 5. A talking bird and an early flower.

Answers to March Puzzles

LOST LETTERS

connected
contented
consented
concerted
converted
congested
conceited
contested
conected

CONNECTED DIAMONDS

o r
a c t t o p
a l t a r t a b l e
O c t o b e r o b b e r s
t a b i d p l e a d
r e d e r d
r s

CROSS WORD ENIGMA

Queen Victoria.

ANAGRAM

Remember thou thy Creator
In the days of thy youth.

From Our Boys and Girls

DEAR AUNT JANE:

I am going to write a few lines now. I am a girl twelve years old and am in the fifth grade. I have one brother and three sisters. Their names are Joseph, Sarah, Emma and Mabel. I also have a little niece who will be two years old in May. Her name is Eva Marie. My brother takes The American Thresherman and Farm Power. My letter is getting long so I will close for this time, hoping to see my letter in print.

Your niece,
Westby, Wis. ALICE DAHLEN.
(Send the little niece's picture for our page, Alice. AUNT JANE.)

Give the world the once over

LISTEN, fellows, to some straight talk. Many a man when he gets to be 40, misses something. He may have lots of money and a fine family, but—

He never "got out and saw things." After he gets settled down, it's too late.

Every man wants to see the world. No man likes to stand still all his life. The best time to TRAVEL is when you're young and lively—right NOW!

Right NOW your Uncle Sam is calling, "Shove off!" He wants men for his Navy. He's inviting you! It's the biggest chance you will ever get to give the world the once over!

The Navy goes all over the world—sails the Seven Seas—squints at the six continents—that's its business. You stand to see more odd sights, wonderful scenery and strange people than you ever dreamed of.

You'll work hard while you work. You'll play hard while you play. You'll earn and learn. You'll get, in addition to "shore-leave," a 30-day straight vacation—which is more than the average bank president can count on.

You can join for two years. When you get through you'll be physically and mentally "tuned up" for the rest of your life. You'll be ready through and through for SUCCESS.

There's a Recruiting Station right near you. If you don't know where it is, your Postmaster will be glad to tell you.

Shove off! -Join the U. S. Navy

DEAR AUNT JANE:

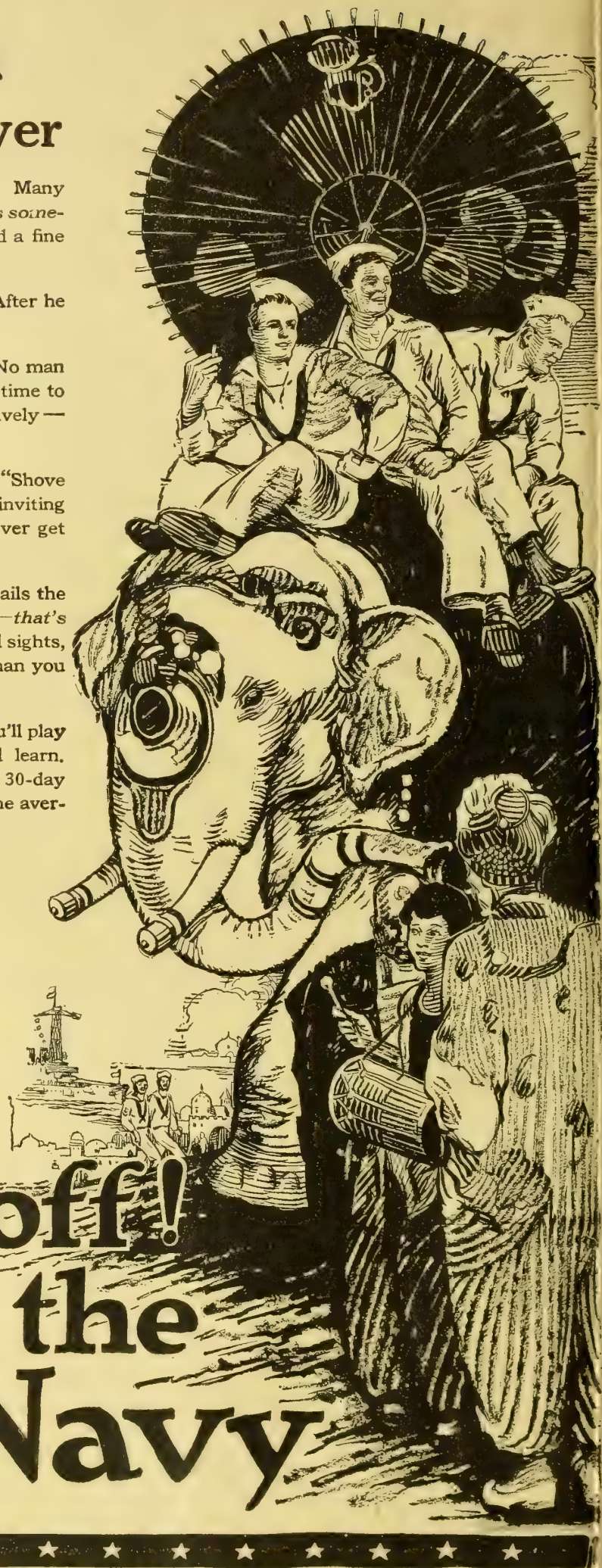
May I join your happy circle? I am thirteen years old. I go to the State Normal School and am in the seventh grade. I love to go to school very much. My sister's name is Helen. She is eleven years old and in the sixth grade at school. Papa takes The American Thresherman and Farm Power. He also has an advertisement in it. I enjoy reading

the Boys' and Girls' Page. I like to read the letters of your nieces very much. I have one cat named Timmy. Our dog Freckles died of old age about a month ago. I wish some of your nieces would write to me.

Your niece,
MERCEDES GUGISBERG.
Mankato, Minn.
(Suppose you write first to some other niece, Mercedes.—AUNT JANE.)

DEAR AUNT JANE:

I am eight years old. We live two miles from school. My father takes The American Thresherman and Farm Power. I enjoy reading the Girls' and Boys' Page. I have three sisters and no brothers. For pets I have one cat named Tiger, twenty-five little chickens, and two calves named Blackeye and Reddy. We have a Saxon automobile. We have



Does Ten Mens Work



One Man Saws 25 Cords a Day

The Ottawa Log Saw falls trees or cuts off stumps level with ground. Saws up logs, cuts up branches, ice, etc. runs pump jack and other belt machinery. Mounted on wheels. Easy to move anywhere. 10 Year Guarantee. Write for Free Book and Cash or Easy Terms. OTTAWA MFG. CO., 2211 Wood St., Ottawa, Kans.

Mention The American Thresherman and Farm Power

PATENTS Write for Guide Book and Evidence of Conception Blank. and model or sketch and description of invention for our free opinion of its patentable nature. High References. Prompt Service. Reasonable Terms. J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.

Mention The American Thresherman and Farm Power

Now Ready!

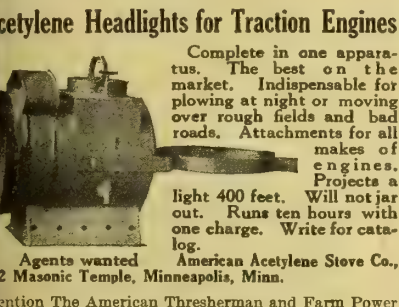
A Complete Course in Gas Tractor Engineering by Correspondence

A postal will bring full particulars and a complete outline of the course.

Clarke School of Traction Engineering
Madison, Wis.

Mention The American Thresherman and Farm Power

Acetylene Headlights for Traction Engines



Complete in one apparatus. The best on the market. Indispensable for plowing at night or moving over rough fields and bad roads. Attachments for all makes of engines. Projects a light 400 feet. Will not jar out. Runs ten hours with one charge. Write for catalog.

Agents wanted American Acetylene Stove Co., 12 Masonic Temple, Minneapolis, Minn.

Mention The American Thresherman and Farm Power

The Old Reliable

Buller Automatic Coupler




Designed for all different makes of steam and gas tractors, automobiles, trucks, trailers, etc.

It is our sincere desire to place a coupler in every thresherman's hands for a try-out. And according to your own judgment, if the coupler has not paid for itself in a half season's run, send it back and we will refund your money, including transportation charges.

Let us send you our catalog, illustrating and giving prices on all the different makes

Buller Coupler Co., Hillsboro, Kans.

Mention The American Thresherman and Farm Power



Threshermen's Wagon Tank

Note Carefully Its Construction

The only wagon tank which rocks on front bolster to prevent twisting of tank. Others looking like this are imitations of our work. Over 8,000 sold in eight years, and without a complaint. A card to us brings you full particulars of the best wagon tank made. Get our big list of agents who say so. Below we give a few agents.

PIONEER MFG. CO.
Box 110 Middlebury, Ind.

AGENTS

Port Huron Engine & Thresher Co., Port Huron, Mich.
Southwestern Port Huron Co., Peoria, Ill., and Wichita, Kans.
Port Huron Machinery Co., Des Moines, Ia.
Port Huron Machinery Co., Minneapolis, Minn.
Kenney Machinery Co., Indianapolis, Ind.
Sachse & Bunn Co., Cherokee, Ia., and Sioux City, Iowa.
Wichita Supply Co., Wichita, Kans.
Quick & Thomas Co., Auburn, N. Y.

four mules and seven horses. The mules' names are Jack, Jude, Bet and Kate, and the horses' names are Eleck, Roy, Roger, Judge, Lou, Maude and Queen. We have four cows and seven calves. We have four geese, five ducks, three turkeys and two pigs. Well, I will close.

Your niece,
Terre Haute, Ind. GEORGIA.
(Are either of your calves like Wayne's, Georgia?—AUNT JANE.)

DEAR AUNT JANE:
This is my first letter to you and I hope to see it in print. Papa takes The American Thresherman and Farm Power. I like to read the Children's Page. We don't live on a



James and Evelyn Willeford, Logan, Iowa.
farm but we have a large place of two acres where we can have chickens and we have a cow. I milk most of the time and take care of the chickens. I have three sisters and two brothers. Their names are Alice, Amy, Evelyn, James and Glen. I am sending a picture of James and Evelyn and I want to surprise papa. Papa has two Avery tractors and a Case separator. He has the county road work in the summer and threshes in the fall. I am fourteen years old and will go into high school next term.

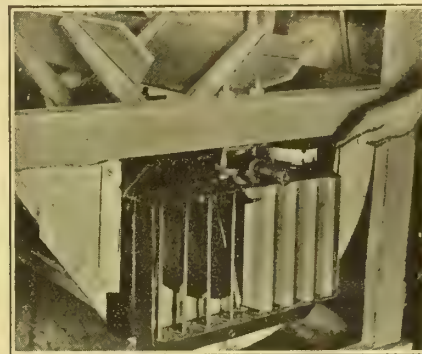
Your niece,
Logan, Iowa. FAY WILLEFORD.
(Thank you for the picture, Fay.
—AUNT JANE.)

DEAR AUNT JANE:
I am a farmer girl twelve years old and go to school every day. I am in the sixth grade this year. My papa takes The American Thresherman and Farm power and I enjoy reading the Children's Page. We have horses, hogs, cattle and sheep. We have turkeys, ducks, geese, guineas and sea fowls. We got two hundred nineteen acres of land. My father has a threshing outfit. I have five brothers and one sister. We have an auto and I like



A Common Sense Attachment For Threshing Rigs

The idea of the Automatic Blast Regulator was hatched in the brain of a practical thresherman. It grew out of a real need for a device that would regulate the air flow to the sieves at all engine speeds.



For an even and steady blast is the very foundation of a good threshing job. Too much or not enough means either a waste of grain or poor cleaning.

Suppose the engine picks up speed perhaps because running a trifle empty. The volume of air immediately goes up, too, and grain is blown over. If through slugging the engine runs abnormally low, then the air flow, being also lowered, is not strong enough to lift the chaff from the grain. Poor work results.

The Automatic Blast Regulator, attached to the fan shaft, will prevent all trouble of this sort. It automatically opens or closes the blast boards at the first sign of a change in the pace.

All you have to do is to adjust the blast to the kind of grain you are threshing. This can be done with one finger and can be changed as often as you wish and while the machine is in operation. The indicator will tell you when your machine is running at its right speed.

With the first order from any county we are giving exclusive agency rights for that county, and until there is an agent appointed there we will sell to any one at list price, less the agent's commission, but we want agents—actual machine men who will push our proposition.

We can fit up nearly every make of machine and every size. Send in the form below for particulars and prices.

A. L. LARSON & COMPANY SCOBEY, MONTANA

USE THIS COUPON—MAIL IT TODAY

A. L. LARSON & COMPANY, Scobey, Montana

I am interested in your Blast Regulator. Please send me your proposition.

I operate a.....machine. Size

Name.....

Address.....

to ride in it very much. As my letter is getting long, will close for this time.

Your niece,
Bellevue, O. ALICE HEYMAN.
(A fine big farm is yours, Alice.
—AUNT JANE.)

DEAR AUNT JANE:

I am eleven years old. I am in the fifth grade. I have two sisters and two brothers. My sisters' names are Pauline and Valaria. My brothers' names are John and Merle. We go to school every day, and we drive our pony. His name is Nig. Our pet is a dog named Rover. We got a saddle for Christmas. My brother is four weeks old and one sister is eight years old and one is six years old. We take The American Thresherman and Farm Power.

Your nephew,
GEORGE SEAR.

Anthony, Kans.

(Isn't the baby brother old enough now so you could send his picture for our page?—AUNT JANE.)

DEAR AUNT JANE:

This is my first letter to you. My brother takes The American Thresherman and Farm Power. I like to read the Children's Page. I am ten years old and am in fifth grade at school. I have two brothers and two sisters. For pets I have a dog, two cats and a pony. The dog's name is Nippy and the Pony's name is King. We have a piano and a Victrola and I take music lessons. We have two cars, a Nash and a Ford. I like to ride in them very much. I hope to see this letter in print.

Your niece,
BERTHA ALICE ERBE.

Blue Mounds, Wis.

(Isn't the Victrola a great pleasure, Bertha? I have one, too.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a little girl eight years old. I am in the fifth grade in school. I have a little brother. His name is Harold. He is almost three years old. I am taking music lessons this summer. For a pet I have a cat named Tom. I have three dolls. Their names are Julia, Edith, and Molly. I have a stove, safe, piano, toy house, trunk, bed, dishes, doll clothes, wagon, and a go-cart. My father takes The American Thresherman and Farm Power. I always look for the Children's Page first. He has a Keck-Gonnerman engine and separator and a big Maytag shredder. We have one Ford auto. We take some fine joy rides in the summer.

Your niece,
LUCILE PURVIANCE.

Chrisney, Ind.

(If you will send Harold's picture, we will publish it on our page, Lucile.
—AUNT JANE.)



Champion

Dependable Spark Plugs

80% Tractor Equipment

WORKING under full load ten to twelve hours at a stretch, the tractor gives spark plugs their most severe test. It means sustained power and terrific engine heat.

Champion Spark Plugs with their famous No. 3450 Insulators are so universally recognized as the plugs best adapted to fit these unusual conditions of shock, heat and temperature changes that they have been chosen as factory equipment on 80% of all the tractors being built today.



There is a Champion Spark Plug for every type of motor car, truck, tractor, motorcycle and stationary engine. Order a set from your dealer today.

Be sure the name Champion is on the Insulator and the World Trade Mark on the Box



Champion
Spark Plug Company
Toledo, Ohio

Mention The American Thresherman and Farm Power

DEAR AUNT JANE:

I am a little girl ten years old. My birthday is March 25. This is my first letter to you. I have two brothers and four sisters. My youngest sister is seven weeks old. Their names are Julius, Charlie, Carrie, Ena, Esther and Alice. Carrie is married. We have four hundred chickens. My brother takes The American Thresherman and Farm Power and I enjoy reading the Children's Page. Papa has an Avery engine and a Yellow Kid threshing machine. I hope to see my letter in print.

Your loving niece,
LOUISE DOHRMANN.

Lost Nation, Ia.

(Baby sister must be old enough now for you to send us her picture for our page, Louise.—AUNT JANE.)

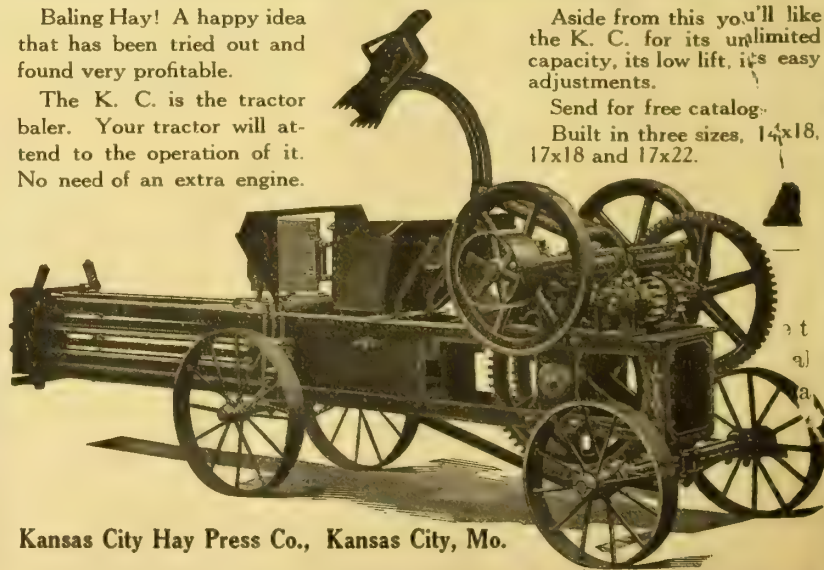
Another Practical Way to Use Your Tractor "In-Between"

Baling Hay! A happy idea that has been tried out and found very profitable.

The K. C. is the tractor baler. Your tractor will attend to the operation of it. No need of an extra engine.

Aside from this you'll like the K. C. for its unlimited capacity, its low lift, its easy adjustments.

Send for free catalog. Built in three sizes, 14x18, 17x18 and 17x22.



Kansas City Hay Press Co., Kansas City, Mo.

Mention The American Thresherman and Farm Power

SYDE TYRES
 inner armor for auto tires. Double mileage;
 punctures and blowouts. Easily applied
 tools. Distributors wanted. Details free.
 Accessories Company Dept. T-2 Cincinnati, Ohio



When you use a Starrett transit or level, you'll be surprised to find how simple it is and yet how reliable.

That's the way with Starrett tools. They give you a feeling of confidence—a sure-ness that the work will be right. They've got forty years' experience in fine tool making behind them.

Write for a free copy of the Starrett catalog No. 21 "AM."

42-53

The L. S. Starrett Company
 The World's Greatest Toolmakers
 Mfrs. of Hack Saws Unexcelled
 ATHOL, MASS.

Starrett Tools



The Morris Improved Beading Tool

Be sure to give size of flues when writing for circular.

This tool enables a man who never had any previous experience to put new flues in boiler, or repair old ones and do a better job than an experienced boiler-maker can do in the old way.

Easy to Operate

Simply work the handle back and forth and the tool automatically does a perfect job. Every lick is just the same as every other one. Works in corners same as anywhere else. All straight work.

Thickens Flue in the Sheet

The same blow that beads the flue expands it. Thus the flue is thickened in the sheet as shown in the picture to the right. Never roll old flues. It makes them thin. Note picture to left. Use a Morris Beading Tool.

Wallace Mfg. Co., Kansas City, Mo.

Farmers Lead as Truck Users

(Continued from page 9.)

Nebraska.....	13	37,300
Nevada.....	48	700
New Hampshire.....	40	3,902
New Jersey.....	17	20,000
New Mexico.....	43	2,810
New York.....	1	94,716
North Carolina.....	29	9,150
North Dakota.....	46	1,314
Ohio.....	3	64,500
Oklahoma.....	16	20,100
Oregon.....	23	11,300
Pennsylvania.....	4	64,200
Rhode Island.....	33	7,000
South Carolina.....	27	9,600
South Dakota.....	19	14,205
Tennessee.....	21	12,000
Texas.....	7	42,250
Utah.....	39	5,300
Vermont.....	44	2,402
Virginia.....	22	11,800
Washington.....	15	23,600
West Virginia.....	34	6,700
Wisconsin.....	24	10,887
Wyoming.....	42	2,900

"As shown by the reports, New York led all other states, having 94,716 trucks in use. Pennsylvania, Ohio, Illinois and California ran a close race for second place, but Illinois won out by a small margin with 65,000. Nevada came last in the list with only 700.

"The fact that trucks showed a larger increase than passenger cars opens the way to some interesting surmising. If trucks continue to increase at the same rate in the future there will be as many in use by 1926 as there are passenger cars at present."

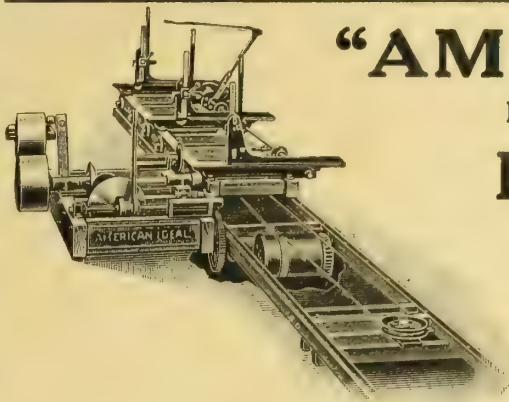
These figures of the Tribune show only the total number of trucks in each state. By courtesy of the International Trail, we furnish 1917 figures showing that farmers are the leading users of motor trucks. As we said earlier in this article, since 1917 large manufacturers have estimated that ten per cent of all trucks found their way to the farms.

"Although in years past merchants and manufacturers have been the largest users of motor trucks, that is not the case nowadays. Reliable statistics compiled for the year 1917 show that there were more motor trucks engaged in the hauling of farm products such as grain, produce, garden truck, fruits, and livestock than were engaged in any other single industry. Hauling of farm products heads the list with 79,789 motor trucks, manufacturers ranking next with 75,928, and retailers coming third with 74,486. These figures show how rapidly farmers are appreciating the economy and superior flexibility of the motor truck and adapting it to their business of farming."

Figures in bulk often have but little bearing on individual cases and problems. For that reason it is our hope to get articles of real news interest, for our readers, which will show unique and successful instances where farmers have solved some transportation problem by the use of a truck. If any tractor owner or thresherman can tell us of his experiences, don't forget that Uncle Silas has his ear to the ground and will welcome your tale of success.

Sunday School Teacher—What do we mean when we speak of borrowing from Peter to pay Paul?

Willie Wise—I guess we mean that Peter is an easy mark.—*Judge*.



"AMERICAN" PORTABLE FARM SAW MILLS

Have added to the earnings of farmers from one end of the country to the other—by enabling them to make their own lumber from their own wood lots, or by doing custom sawing for their neighbors. They are the most popular farm mills on the market—simple, sturdy, requiring little power, needing no skill or experience to operate.

Turn Trees Into Money

Lumber was never so high. Standing timber is idle investment. Your tractor or farm engine, driving an "American" Saw Mill, will give you the lumber you need at the mere cost of sawing. Or you can saw lumber for your neighbors with good profit, at odd times. Write for the catalog—prices right, deliveries prompt.

AMERICAN SAW MILL MACHINERY CO.
 HACKETTSTOWN, N. J. NEW YORK, N. Y.
 71 Main Street 1371 Hudson Terminal

Threshermen—How Would You Like an Extension Feeder That is as Easy to Pitch Into as This One?



Write for catalog that contains prices and description of this Wonderful Time and Labor Saving Extension, as well as all other supplies that a thresher needs.

Our big catalog is a handy index to every item needed around the threshing outfit—

Rubber Thresher Belts	Stay Bolts	Log Chains
Canvas Thresher Belts	Special Cap Screws	Oils
Seamless Boiler Flues	Special Taps	Low Down Ext. Feeders
	Hose, Belting, Packing	

Let us mail you the catalog. It's free.

GRABER SUPPLY COMPANY Hutchinson, Kansas

ENDLESS THRESHER BELTS

150 ft. 8 inch 5 ply canvas stitched.....\$130.50
 150 ft. 8 inch 4 ply red rubber.....\$157.30
 Other lengths and sizes at proportionate prices.

Kansas City Rubber & Belting Co. 712 Delaware Street
 KANSAS CITY, MO.



A CURVE TYPE OF SHOCK LOADER

Has a continuous Lift which prevents the shocks from being jarred or dropped down on a cross carrier, thereby preventing the grain from being shelled out. It is light weight, weighing less than a ton. Four horses handle it same as a binder. Easy running, and no small working parts.

It loads a load of shocks in 3 to 5 minutes and does away with half of the bundle teams and wagons, besides it does the biggest half of the hardest part of the work and does that better, cleaner and quicker than a man does it with a fork by hand.

Illustrated circular and prices furnished upon request.

Albertson Loader Co.

572 Wentworth St., St. Paul, Minn.

Custom Threshing as a Business

(Continued from page 7.)

Farmers demand and appreciate a good machine that does honest work. Repairing the outfit every season before it goes into the field is the only sensible method to be practiced, for when threshing time comes there is no time to be wasted in the field while competitors are cleaning up on the work. Repair work can only be properly done in the shed where the operator has sufficient time and proper tools to do the work right. Field repairing is not only wasteful of valuable time but it ordinarily cannot be done in a satisfactory manner when it must be hurriedly pushed through in order to save time. A machine that has been thoroughly overhauled before threshing starts will, unless exceptionally hard conditions are met, run through a long season's work with practically no serious trouble.

In order to arrive at what is the correct price to charge for threshing it is necessary to count the cost of threshing. This can be done by figuring as closely as possible the expense of operating the outfit for one day and dividing that by the number of bushels that can be threshed on an average day's work. To that result enough must be added to make a good profit. The last year or two farmers are inclined to think that threshing prices have been too high. They have not been required to count the cost as the thresherman must, and for this reason the farmer usually objects to what is really only fair and what the thresherman must get if he is able to buy high priced machinery and repairs and continue to serve the farmer so he can market his grain. A fair, reasonable price in the light of existing conditions is not too much for the farmer to pay for threshing when it is based on the cost of the service rendered and a reasonable profit added. If the threshermen are to stay in the business with efficient and expensive machinery, threshing must be a profitable business proposition.

A Little Hole Misleads Them

(Continued from page 8.)

The Old Man decided to make somebody "take turkey." He called in the head of the Jobbers' Division of the plant. "Which one of your men has some sense about a balky tractor?" he shouted at the inoffensive Division head.

The Jobbers' Division man scratched his head. The Old Man had almost made him forget the names of every man he had. After a moment he named two or three who were then at the plant.

The Old Man selected Jim Spark. He sent orders to Jim to hop the first rattler for Springfield, Mass-

achusetts, and from there to make all haste to the scene of the fair.

Spark wasn't much of a talker, but he could act with some speed; he was on the next fast Central train going Eastward. By the next day he was strolling across the commons of a small Massachusetts county seat, headed for a lonely-looking tractor sitting quietly under a shed.

Now Spark was a real tractor trouble-man. He was glad to hear other people's stories of the difficulties caused by a machine, but he followed his own methods in determining the cause of the trouble. Furthermore, Jim liked to do the real work without being bothered by local tales. So he decided to work before seeing anyone; he recognized the machine as the one which had caused the trouble, almost as soon as he reached town; whereas a less exper-

ience man would hardly have noticed the machine at all.

Jim glanced at the wiring, saw that the carburetor should be in working order, then cranked the tractor. The machine seemed at first to be running perfectly; but Jim's seasoned ear detected something irregular in the sound. Had the tractor been a person, Jim would have said it was short of breath. After a dozen strokes, one cylinder would miss. It was the forward cylinder. Jim detached the wire at the spark plug, allowing the engine to run on one cylinder for a bit. Then he would bring the wire in contact, and the cylinder would register a good stroke. "Umm," said Jim to himself,—"this sound as if she can't get enough gas for a regular explosion."

The carburetor couldn't have been in better shape. Jim got out his tools

and loosened the nuts that held in place the long tube from the carburetor to the forward cylinder. To say time, he removed the carburetor with this pipe, unfastening the manifold heater, at the front end of the pipe from the cylinder body.

The pipe was clear of obstruction. Now right here is where most servicemen would have stopped, concluding the trouble did not exist in this section of the machine. But Jim was of the old, hard school—the school of experience. He knew the trouble did exist in this section. Ignition was right; the carburetor was right; the power should be there. He began to feel along the pipe; going to the front end of the manifold, he felt gingerly in the sooty section where the exhaust pipe seems to curl, like a big snail in his shell, around the intake for the forward cylinder.



Strengthen Where Weak

What was the weakest part in your equipment last year? Was it your belts that were "out of step"? Guessed it right the first time. Then that's where you want to strengthen.

You've heard of Gandy, of course. No belt with such an enthusiastic and nation-wide following could escape your notice. But have you ever tried it?

Gandy Belts appeal especially to those who take a pride in good equipment. Seems as if they were just made to order for them.

They're constructed to meet hard service conditions,

of closely woven cotton duck, folded, welded and seasoned in oils, which accounts for their great resistance to the effects of abuse and uncertain weather. They'll establish a new record for you in performance, economy and length of service.

Gandy Thresher Belts have back of them forty years of honest workmanship—plus the knowing how to make the best belts for a specific purpose. Each belt bears the Gandy trademark and recognition further simplified by the bright green edge.

And Gandy engineers are ever ready to help with your belting problems.

The Gandy Belting Company, Main Office and Factory: **729 West Pratt St., Baltimore Md**
BRANCHES: 36 Warren Street, New York City. 549 W. Washington Street, Chicago, Illinois



rin began to spread over Jim's He placed the pipe at the back machine, carefully putting bolts in their proper places. rring together his personal tools, rolled over to the telephone and got in touch with Charlie, who was busy telling about the features of Blank tractors in age some miles from the county

a may believe Charlie lost no in gathering up the steering- of America's best known s of transportation (give you guess!) and bumping over ruts 'the city.'

e work being over, Jim was ing the situation. He drew ie into the rear of the tractor's g-place, took Charlie's hand out it into the open end of the fold heater. Then Charlie d, too. For he felt a little hole. tle holes do lots of damage. may recall the story the school- er used to tell, while we sat hless on the front edges of our

hard wooden seats. It concerned itself with the little Dutch boy who found the great dyke of Holland leaking, and he placed his finger in the hole, then his arm, hanging game-ly on until a sturdy burgher saw him and brought help.


This little hole in the manifold heater was just as grievous, in its small way. Every time the exhaust expelled its breath in a valiant effort to help the tractor in general, it pulled much of that fine mixture of gas through the little hole between the intake and the exhaust pipes. When enough gas was caught between piston and cylinder to make a good explosion, the first cylinder would furnish its share of power. Most of the time it was exploding on a mixture too thin to produce real power.

Jim's work was done. The tractor and the firm were vindicated. After inserting a new manifold heater, the 9-21 stepped off with the three fourteen-inch plows, just as Charlie has declared she would. The local wiseacres who had been so sar-

castic were forced to hold their peace.

Everyone should have been happy: that is, everyone connected with the Blank Company. But there was one man who roared louder than ever when he heard the whole story—It was the Old Man. He wanted that Massachusetts county to hold another fair.

STATEMENT OF
The Ownership, Management, Circulation,
Etc., of
The American Thresherman and Farm Power
Required by the Act of August 24, 1912.
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The Clarke Publishing Co., Madison, Wis.
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B. B. Clarke, Madison, Wis.
Managing Editor—
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Business Manager—
E. E. Parkinson, Madison, Wis.
Owners—Clarke Publishing Co.
B. B. Clarke, Madison, Wis.; James L. Clarke, Madison, Wis.; M. Belle Clarke, Madison, Wis.; Edward E. Parkinson, Madison, Wis.
Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities. None.
Signed, B. B. CLARKE, Editor.
Sworn to and subscribed before me this 27th day of March, 1920.
Signed, JOSEPHINE S. NELSON,
(Seal) Notary Public.
(My commission expires November 5, 1922.)



Limestone Pulverizers

Sold direct from
Factory to Farmer

Write for catalog

O. B. WISE
Pulverizer Co.
Knoxville, Tenn.

Mention The American Thresherman and Farm Power



A Gandy Belt

Farm Belts Are No Different Than Factory Belts

For nearly 25 years Cling-Surface has been used in thousands of big factories all over the world.

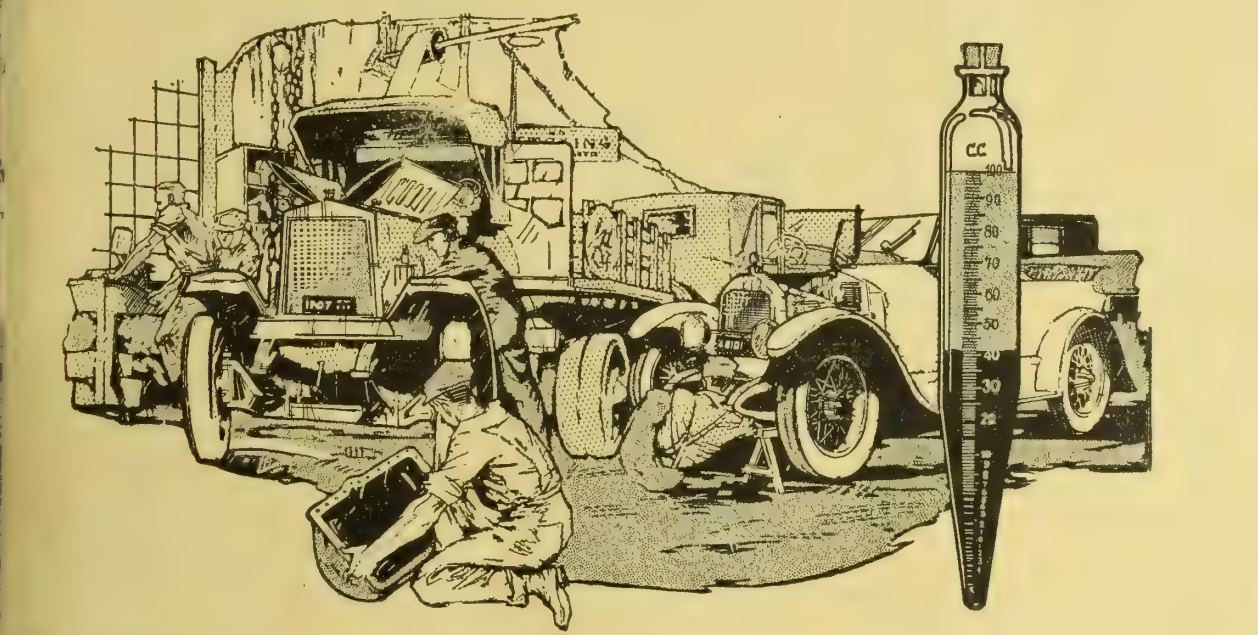
They use it because it keeps their belts pliable, waterproof, preserved and on the job; because it is the only thing which stops slipping so all belts can be run easy or slack under full loads.

Men on the farm also require exactly those results. Only Cling-Surface will do it.

Buy in 1, 5 or 10 lb. tins from your dealer or from us. Ask us.

CLING-SURFACE CO.
1070 Niagara St.
Buffalo, N. Y.

Mention The American Thresherman and Farm Power



The chief cause of engine troubles—sediment in inferior oil

How black sediment in ordinary oil ruins engine efficiency

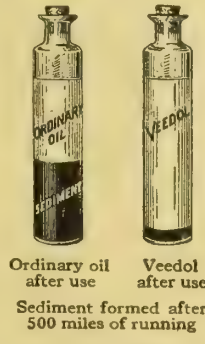
WHEN your passenger car breaks down repeatedly or your trucks and tractors are laid up for repairs and goods are held for delivery

- when repair bills mount up
- that's when you want to know what causes such common engine trouble.

Automobile engineers find that 90% of all engine trouble is caused by improper lubrication.

Unseen damage day by day

Ordinary oil breaks down under the terrific heat of the engine—200° to 1000° F. A great quantity of sediment forms which has no lubricating value. The oil film is destroyed. Metal-to-metal contact results. Friction and wear begin. The engine overheats. Bearings burn out. Carbon forms rapidly. Serious trouble inevitably follows.



Veedol maintains the piston seal, preventing leakage and contamination of oil in the crankcase. Common engine troubles are almost eliminated. It also reduces evaporation between 30% and 70%—giving long mileage per gallon of oil.

Buy Veedol today

Drain oil from crankcase, wash out with kerosene, then fill up with Veedol.

A run on familiar roads will show you that your automobile or truck has new pickup and power.

Leading dealers have Veedol in stock. Every Veedol dealer has a chart which shows the correct grade of Veedol for your machine. The new 100-page Veedol book on scientific lubrication will save you many dollars, will help you to keep your engine running at minimum cost. Send 10c for a copy.

How Veedol solves the sediment problem

Veedol, the lubricant that resists heat, reduces the amount of sediment formed in the engine by 86%. Notice the sediment test above.

TIDE WATER OIL
Sales Corporation
1538 Bowling Green Bldg.,
New York City
Branches and distributors in all principal cities of the United States and Canada.



Buller Lagging Stretchers for Covering Different Sizes of Pulleys

It Speaks for Itself—Read Below

Buller Coupler Company, Hillsboro, Kansas.

Gentlemen:

I find that your No. 2 Lagging Stretcher is just the thing to put a covering on a cylinder pulley. I can stretch the lagging on good and tight and it looks like a neat job when through.

I have two pulleys for my 32" Case machine, one for wheat and the other larger in diameter for threshing maize, and I have covered them both with your lagging stretcher, using your crowned pulley lagging that I bought from you last May, and did a smooth, neat job that was just as good or even better than if done at the factory.

I intend from now on to use the cast iron pulleys in preference to any other pulley since I have found a way to put on a cover that will not pull off.

Yours very truly,
Walter S. Hoffman,
Plainview, Texas.

Our catalog describing and giving prices on the Buller products will be gladly sent on request.

Buller Coupler Company, Hillsboro, Kans.

CLASSIFIED ADS

POSITIONS WANTED

LICENSED STEAM ENGINEER wants position on rig. Eleven falls threshing. Prefer Kansas. References. Jack Sheesley, 3618 Fifth St., Des Moines, Iowa.

POSITION WANTED—Experienced operator wants position operating gas tractor. James Weiler, 1733 Penn Ave., Kansas City, Mo.

WANTED—Position as separator man in the Northwest for the season of 1920. Twenty years' experience in tending separator. Can give best of references. State wages in first letter, and make of separator. Nick Thomas, Gilbertsville, Iowa.

WANTED—Position as thresher designer. Experienced and competent. College graduate. Own patents. Can superintend work. Traveled extensively, one year Argentine Republic. Good references. Address N.R.H., care of The American Threshermen and Farm Power, Madison, Wis.

HELP WANTED

WANTED—Five men who can operate threshing machinery who haven't the smoke habit. State experience and wages wanted in first letter. A. T. Roberts, R. 3, Coffeyville, Kans.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

FOR SALE

FOR SALE—20-H. P. Baker engine. Aug. Hohenbrenk, Kalida, O.

FOR SALE—Avery separator 32x60, in good order. E. P. Janke, Lehigh, Kans.

FOR SALE—20-H. P. steam outfit at a bargain. Ivan Saul, Pleasant Lake, Ind.

FOR SALE—Morris beading tool, used twice. Price \$25. John Snell, Fowlerville, Mich.

FOR SALE—One 20-H. P. Alamo gas engine, like new. F. J. Keppler, Luckey Ohio.

FOR SALE—Eight-inch extension rims for Waterloo Boy tractor; also spike lugs. W. C. Eaking, Derby, Ohio.

FOR SALE—No. 3 Mansfield huller, fully equipped, in good repair. \$400. Earl Zeigler, Shiloh, Ohio.

FOR SALE—One Bates steel tractor and four-bottom plow. Cheap. Harding & Kelsey, Lowell, Ind.

FOR SALE—Case 36x58 steel separator with new attachments. Cheap. Will Mentzer, R. 1, North Henderson, Ill.

FOR SALE—One case 65-H. P. steam engine in A-1 condition. E. C. Johnson, R. 2, Worthington, Minn.

FOR SALE—32x54 Huber separator, in good running order. Geo. M. Smith, R. 3, Berea, Ohio.

FOR SALE—Port Huron 36x60 separator. Complete equipment. Bartelmay & Grimm, Box 151, Morton, Ill.

FOR SALE—8½x12 Russell engine; 32x60 Avery separator. Together or separate. Ross Brothers, Hebron, Ind.

FOR SALE—Cider mill, Boomer & Boochart, fully equipped, cheap if sold at once. H. O. Johnson, Losantville, Ind.

FOR SALE—Reeves 16 engine, ready for threshing, in good shape. \$800. No. 5138. Robert Kading, Casey, Ia.

FOR SALE—25-H. P. Pitts engine in good condition. \$800. Axel Nordstrom, Rutland, N. Dak.

FOR SALE—Marsh steam pump, used only six days. \$15. Geo. M. Wangsvick, Mott, N. Dak.

FOR SALE—9-18 Case tractor, plowed twenty acres, good as new. Am buying larger outfit. Guaranteed. E. B. Powers, Vaucluse, Va.

FOR SALE—Rumely 16-H. P. double engine, priced to sell. W. C. Izor, R. 1, Farmersville, Montg. Co., Ohio.

FOR SALE—One 36x60 Rumely Ideal separator, complete, in A-1 shape; at a bargain. John S. Pukrop, Ivanhoe, Minn.

FOR SALE OR TRADE—12-24 tractor for livestock or 28-inch self feeder. L. M. Morris, Buckney, Mo.

FOR SALE—Case 10-18 tractor. Has been used four full days as demonstrator. Gerald D. Kruse, Hale, Iowa.

FOR SALE—Avery 12-25 tractor, 1918 model. Never used. Bargain. Henry Elston, Muscoda, Wis.

FOR SALE—One Eli Power hay press, 16x18; one Sandwich hay press, 16x18. C. J. Aydt, McLeansboro, Ill.

FOR SALE—One first-class feedmill, doing good business. For particulars, write T. H. Boeckman, Ossian, Ia.

FOR SALE—12-25 Waterloo Boy tractor, in good condition. \$325. Joe J. Blais, Watertown, S. Dak.

FOR SALE—36 complete Avery, feeder, A-1 condition. Frank Rayman, Myrtle, Minn.

FOR SALE—One 14x18 inch Ohio steel frame belt power hay baler. T. Sessors, Mount Prospect, Ill.

FOR SALE—8-16 Happy Farmer and two-bottom Emerson plow, \$400. Frank Grogan, Templeton, Wis.

FOR SALE—Two-inch charcoal iron boiler tubes, at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—30-60 Emerson-Brantingham tractor—\$1600. Ross Power Equipment Co., Indianapolis, Ind.

FOR SALE—12-25 Huber tractor. New magneto, first-class running order. \$750. C. B. Lindberg, Harvard, Nebr.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Dixie magnetos, like new; \$20 while they last. D. W. Newhouse, Kingston, Ohio.

FOR SALE—27-H. P. compound steam Reeves engine and Avery separator, 36x60. Run three years. P. W. Kelly, East Moline, Ill.

FOR SALE—One Nichols & Shepard outfit, 20-H. P. engine and 36x56 separator. Priced right, nearly new. Frank Cox, Jewett, Ill.

FOR SALE—One two-cylinder 15x30 Huber engine. Cheap if taken soon. In first-class shape. W. L. Vought, R. 1, Bingham Lake, Minn.

FOR SALE—20-Advance, 20-Rumely, 20-Avery return flue, 16-Reeves, 36x58 Case separator. Frank Serrine, Granville, Ill.

FOR SALE—Twelve-inch extension rims for twenty-inch drivers. Complete with bolts. For Russell engine. Price \$75. Bruno Albin, Clinton, Mo.

FOR SALE—One 30-60 International Mogul tractor, in good condition, for \$700. Address Wm. Leffelbein, Lexington, Nebr.

FOR SALE—Russell 36x60 separator, always shedded, good belts. Extension rims for 30-60 OilPull. P. W. Blomberg, Falun, Kans.

FOR SALE—Nichols & Shepard 35-H. P. double cylinder plow engine, equipped with rocker grates, Baker valves, extension rims. Will trade for good 25-H. P. engine. H. H. Gabriel, Chokio, Minn.

FOR SALE—One 16-H. P. Frick; one 15-H. P. Case; one 32-steel Case; one 32-Red River Special; one 32-Avery. This machinery will stand inspection. Wm. Seyb, Donnellson, Iowa.

FOR SALE—Advance Rumely Ideal, 36x60, with latest make Ruth feeder and Advance swinging cross conveyor. New 1919; good reason for selling. Oscar T. Tande, R. 4, Osseo, Wis.

FOR SALE—1915 seven-passenger Mitchell car. Run less than seven thousand miles; in good shape. Geo. A. Stivarius, Fennimore, Wis.

FOR SALE—One 16-H. P. Avery engine, return flue. Would consider a trade on a truck or Ford touring. W. H. Schanfeld, Alta Vista, Ia.

FOR SALE—No. 5 Aultman & Taylor Special clover and alfalfa huller. A-1 condition. Price \$750. Swavel Bros., R. 1, Morral, Ohio.

FOR SALE—Four-bottom power lift Avery plow, used one season, and new pilot guide for 25-50. Priced cheap. J. H. Withers, Liberty, Nebr.

FOR SALE—18-H. P. Gaar-Scott, good condition; 36x56 Aultman & Taylor separator, fair condition. Priced to sell. Rox Fix, Marshall, Ill.

FOR SALE—36x60 Port Huron separator, used thirty days, like new. Never rained on. Price \$1200. C. M. Smyres, Windon, Kans.

FOR SALE—40x60 Nichols & Shepard separator, Garden City wing feeder, rebuilt, repainted. 35-70 tractor. Sell separately. Box 592, Fulda, Minn.

FOR SALE—36-inch Langdon Ideal feeder, crank knife band cutter, used two weeks, A-1 condition. A. F. Cummins, Union, Iowa.

FOR SALE—26-H. P. Port Huron in first-class condition, portable sawmill. Will sell together or separately. Jonathan Fruits, Crawfordsville, Ind.

FOR SALE—One Corn Belt feed grinder No. 5; one Ham headlight; one ratchet cylinder wrench; one Swift lubricator. Jos. H. Keller, Milan, Ohio.

FOR SALE—Waterloo tractor, John Deere plow, Republic one and one-half ton truck, Hudson auto. H. J. Onken, R. 4, Slayton, Minn.

FOR SALE—Barnes pump, \$5; new hose, \$12; self guide for Titan tractor, \$12; 36-inch Langdon feeder, good shape, \$100. Wm. Roetter, Jr., Palmer, Kans.

FOR SALE—J. I. Case 28x50 steel thresher, Ruth feeder, wind stacker. Want larger machine. E. C. Foote, Irvington, Ky.

FOR SALE—Hart-Parr 30-60 tractor; Minneapolis separator, 36x56; fully equipped, new Garden City feeder. Good condition. W. F. Martin, Odell, Ill.

FOR SALE—Hart-Parr 60. Will furnish new cylinders and pistons if wanted. Reasons for selling—I have quit farming. A. B. Farsdale, Michigan, N. Dak.

FOR SALE—Baker thresher 18-H. P. engine; 33x56 separator; run two seasons. Selling on account of owner's death. John Thrawley, R. 4, Middletown, Ind.

FOR SALE—36x60 Huber separator, equipped with wind stacker, Garden City feeder and Peoria bagger. \$600. O. J. Huber, Charlotte, Mich.

FOR SALE—30-60 Aultman & Taylor tractor, new July 1919, good as new. Russell separator, 36x60. Going out of business. John Kessler, Elmwood, Ill.

FOR SALE—Two 32x52 Advance separators, price \$200 and \$250. In good shape. 32-inch Ruth feeder. Fred Leach, Atlanta, Ind.

FOR SALE—One new sixty-foot cable, three-fourths-inch, ready for use. First check for \$12 will get it. Frank Crocker, Indianola, Nebr.

FOR TRADE—10-30 Case, steam, good shape, for single or double cylinder tractor, 12-25 or larger. Leonard Reid, Clarendon, Texas.

FOR SALE—One silo filler, type A, I. H. C., in good condition. \$200 takes it. Also Ford engine and radiator, in good order. John M. Kovanda, Oxford Junction, Iowa.

FOR SALE at Bargain—Joliet No. 2 corn sheller, one year old, with thirty-four foot drag feed. Shelled less than 20,000 bushels of corn. O. B. Stribling, Box H, Paton, Ia.

FOR SALE—22-H. P. engine, 32x54 separator. Separator new last year; engine in good shape. Good reason for selling. Price right. O. D. Gschwind, R. 3, Fremont, Ohio.

FOR SALE—A Bargain—Heineke feeder, New Improved, used two seasons, 30-inch, \$75. Isaac M. Noel, R. 3, New Holland, Pa.

FOR SALE—25-50 Aultman & Taylor gas tractor. 32x56 New Model Case separator, used eighteen days. Good new. John Eickhoff, Falls City, Nebr.

FOR SALE—One Huber steam engine 32x54 Wood Brothers separator; 32x Advance; 15-30 GasPull tractor. O. Tiemann, Hornsby, Ill.

FOR SALE OR TRADE—40-80 Minneapolis tractor for steam engine for 20 or 25-H. P. R. F. D. Box 10, Holstein, Nebr.

FOR SALE OR TRADE—One 36x Red River Special, complete with attachments. A bargain, well-house Oliver Buller, Fairmount, Ind.

FOR SALE—Aultman & Taylor steam engine 16-20 and 36x56 separator, both in fine shape. Price \$1,200. John Famulener, R. 4, Galesburg, Ill.

FOR SALE—Rumely engine, 20-H. P. also some parts for Nichols & Shepard separator, and new cook car. A. S. Burholder, Marion, Kans.

FOR SALE—25-H. P. Huber engine 40x64 Rumely separator, run for seasons. Victor Henderson, Grove City, Minn.

FOR SALE—A new 15-30 Townsley tractor in first-class shape, run thirty five days. Going to quit the business. Hugo J. Stoelk, West Side, Ia.

FOR SALE—40-65 Twin City tractor, run ninety days. Good reasons for selling. Delperdang & Schemmel, Bancroft, Ia.

FOR SALE—Avery undermounted engine and threshing machine, 42x64, in good shape. Good reasons for selling. Delperdang & Schemmel, Bancroft, Ia.

FOR SALE—Greyhound thresher, 32x56 run three seasons. Will sell at reasonable price. Will Kuebler, R. 1, Salina, Mich.

FOR SALE—Threshing outfit; 30-Hart-Parr, 32x54 Racine separator, fine shape. Price \$1000. W. G. Crab Monmouth, Ia.

FOR SALE—Steam threshing outfit 20-H. P. Huber, 40x62 Case steam separator, Garden City feeder and blower. F. W. Kuhlman, Hubbard, Iowa.

FOR SALE—Aultman & Taylor threshing outfit; Tornado ensilage cutter; Birsell clover huller. A. R. Newell, Adm. Magnolia, O.

FOR SALE—One rebuilt 8-16-H. P. kerosene tractor; one 12-25-H. P. rebuilt Avery kerosene tractor. For information address, Avery Company, Peoria, Ill.

FOR SALE—A new 15-30 Townsley tractor in first-class shape, run thirty five days. Going to quit the business. Hugo J. Stoelk, West Side, Ia.

FOR SALE—Avery threshing rig, fully equipped; 40-80 1919 tractor, 36x58 separator. Run thirty days. John Pishn Cleburne, Kans.

FOR SALE—16-H. P. Advance; 18-H. P. Gaar-Scott, Rumely and Reeves separators. Want wheel tender. Wm. Vandr Mendota, Ill.

FOR SALE—28-inch Case steel feeder. One nearly new Myers cog gear water pump with fifteen-foot hose. Also two inch flue roller. Claude Johnson, T. Konsha, Mich.

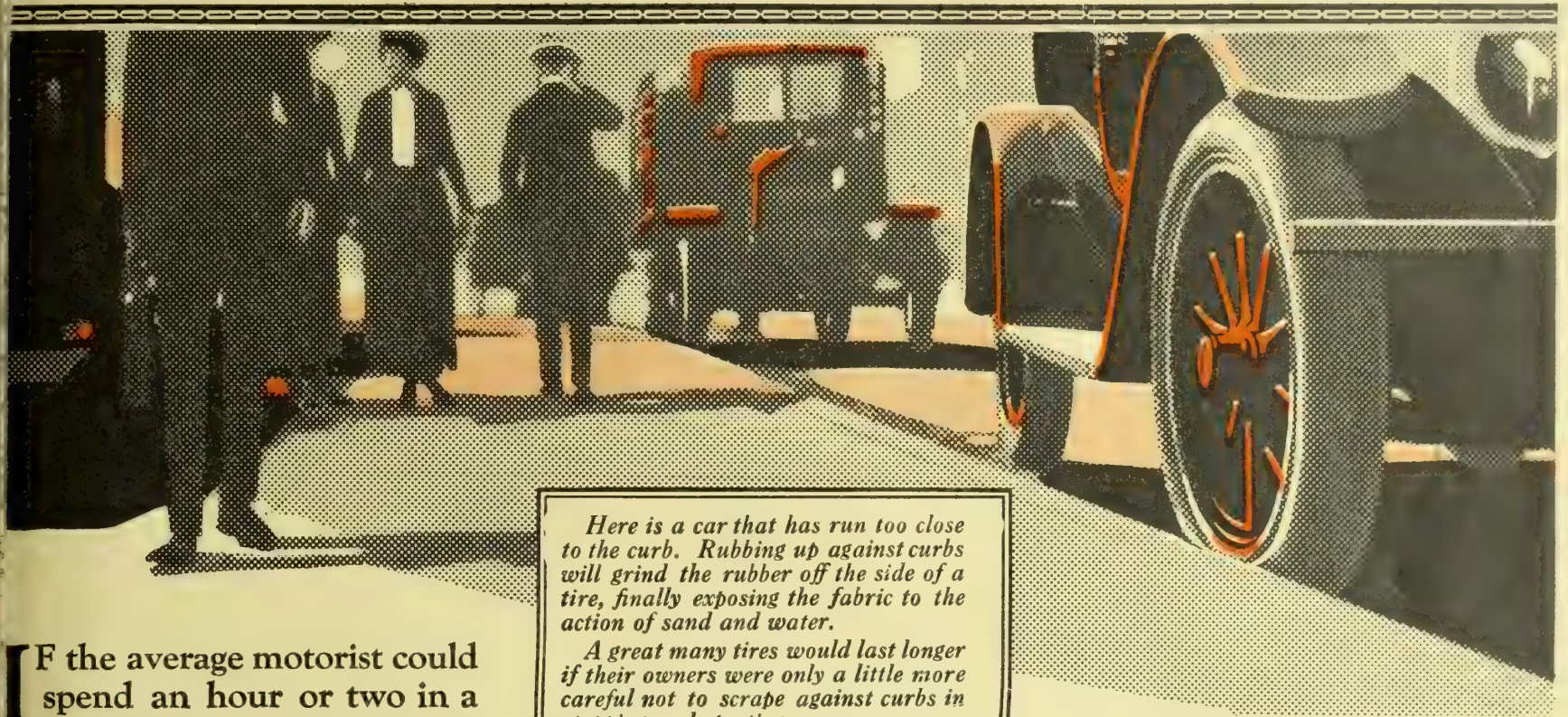
FOR SALE—16-H. P. Huber engine; 32x52 Nichols & Shepard separator, fully equipped; No. 6 Birdsell clover huller mounted water tank. All in good working condition. Will offer at a bargain. W. Nyswonger, R. 5, Lacona, Iowa.

FOR SALE—16-H. P. Frick engine; 15-H. P. Nichols & Shepard engine, water tank; 36-inch Wood steel separator nearly new. All in good running order. Case 10-20 tractor, new. Will trade for other stock. A. J. Kleinjan, Durant, Ia.

FOR SALE—22-H. P. double Gaar-Scott flues and gears nearly new, whole engine thoroughly overhauled. A bargain for cash or good paper only. One adjustable sieve for 60-inch separator; Moore pump. Louis Smith, Smith Center, Kans.

Forty million tires for 1920

What kind of tires are they



Here is a car that has run too close to the curb. Rubbing up against curbs will grind the rubber off the side of a tire, finally exposing the fabric to the action of sand and water.

A great many tires would last longer if their owners were only a little more careful not to scrape against curbs in stopping and starting.

[F the average motorist could spend an hour or two in a vulcanizing shop—watch the tires coming in for repair with all their weaknesses showing—talk to the shop manager away from the cheers of the tire salesmen—

He would see what comes of thinking too much in terms of “concessions” and “allowances.”

* * *

Concessions and allowances are what the irresponsible tire dealer lives on.

He finds it easier to convince a man that he will make good on a tire if it goes bad than to convince him that it won't go bad.

What practical motorists are looking for today is good tires

—not tires that may have to be made good.

And they are going more and more to the dealer whose business is based on *quality* instead of on chance.

* * *

The United States Rubber Company stands back of that kind of a dealer with all the tremendous resources at its command.

It has staked a larger investment on quality than any other rubber organization. Its first thought has always been of the tire user—putting his problem

before the problem of markets.

Every important advance in tire manufacture has come from the United States Rubber Company—the *first straight-side* automobile tire, the *first pneumatic* truck tire, the *grainless rubber* solid truck tire, for instance.

The U. S. guarantee is for the *life of the tire*, and not for a limited mileage.

* * *

Nearly every man pays for U. S. Tire quality, but he doesn't always get it.

If he did the country wouldn't need forty million tires this year.

United States Tires

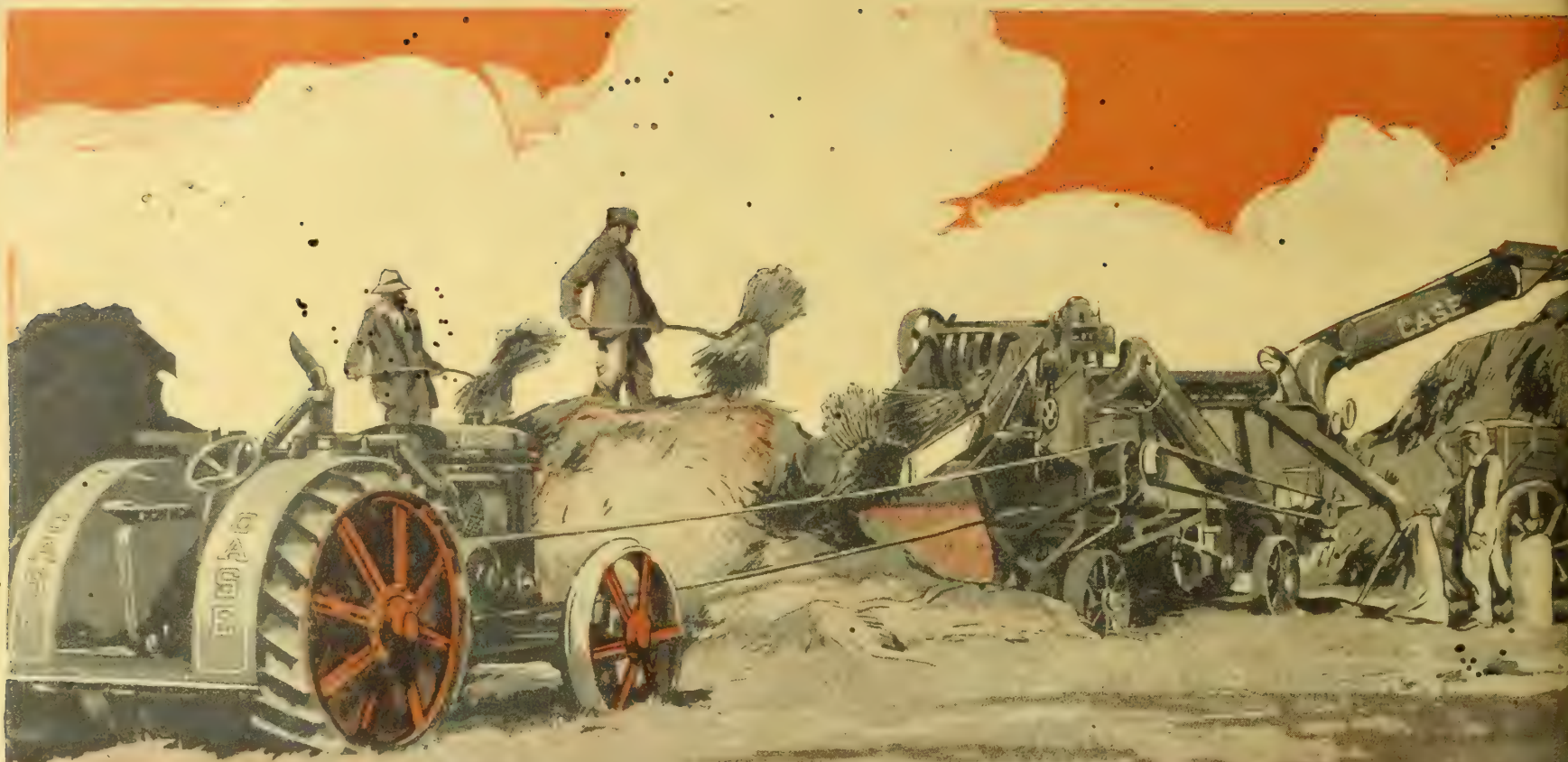
United States Rubber Company



Fifty-three
Factories

The oldest and largest
Rubber Organization in the World

Two hundred and
thirty-five Branches



Good Threshing is the best part of Good Farming

DO your threshing this year with a Case Thresher. It will give you the full reward you have worked for all through the seasons of soil preparation, seeding and harvest.

The Case Steel Built Thresher in any of the six sizes we manufacture is the machine of clean threshing, thorough separation, perfect cleaning and unequalled saving of all grains and seeds.

Case general purpose threshers may be converted into Pea and Bean Threshers by simple changes of parts.

Case Steel Rice Threshers are built in five sizes. All are convertible into Wheat Threshers.

Case Steel Peanut Threshers are furnished in two sizes.

Write for catalog of Case Galvanized Steel Built Threshers and Case Kerosene Tractors or Case Steam Tractors to drive them.

J. I. CASE THRESHING MACHINE CO., Inc.

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Making Superior Farm Machinery Since 1842

CASE
TRACE MARK REG. U. S. PAT. OFF. AND IN FOREIGN COUNTRIES
POWER FARMING
MACHINERY



Look for the
EAGLE
Our Trade Mark

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with, the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

NOTE:

We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co

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Farm Mach.

The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON, WIS.

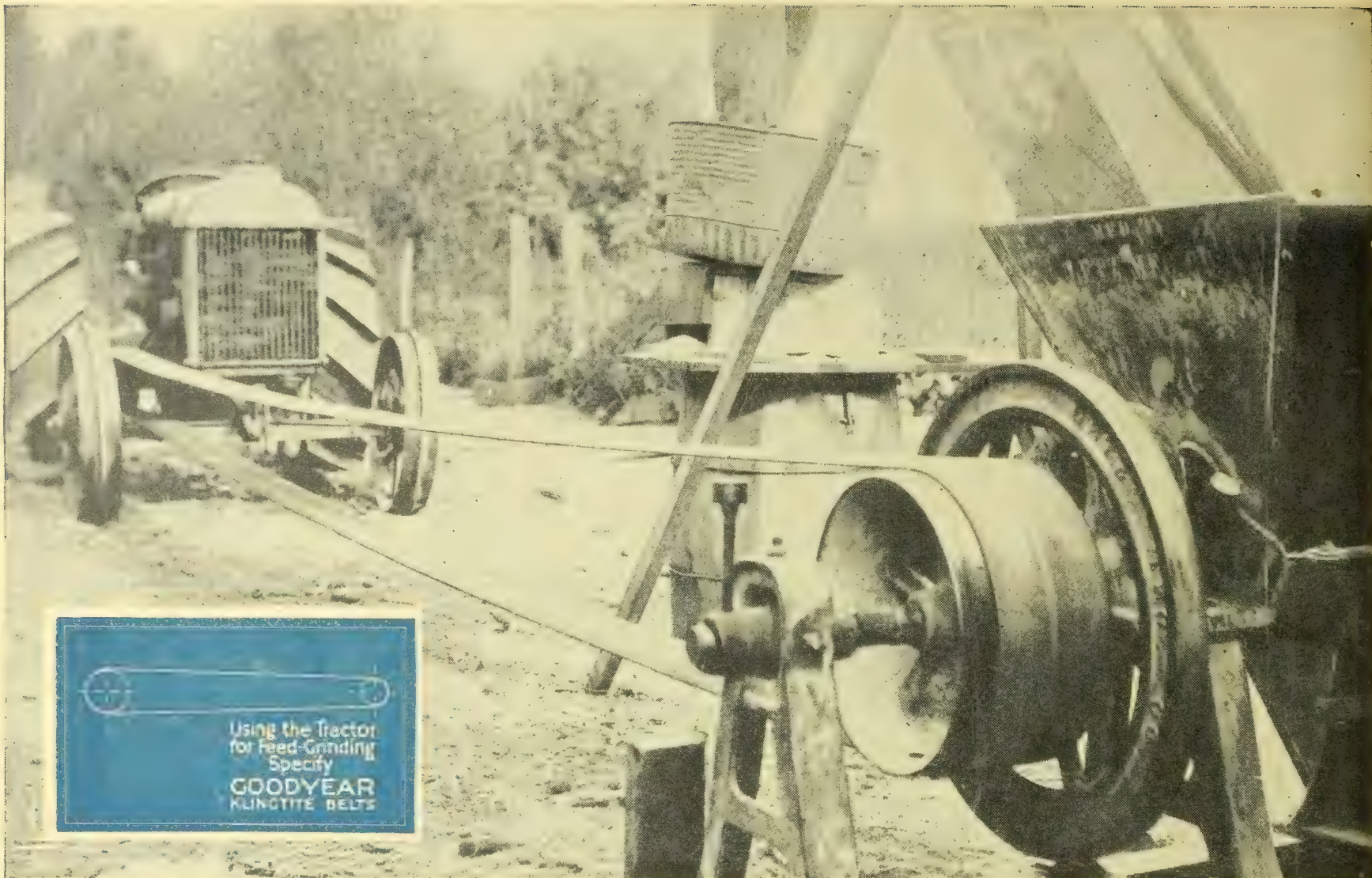
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June 1920

Vol. 23 No. 2

Yearly Subscription Price One Dollar



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Feed to Grind—and Goodyear Belts

Farmers who know all too well the shrinking nature of some belts will be as interested as the interviewer was in J. H. Gibson's reply to the question, whether he ever used his Goodyear Klingtite Belt on rainy days. "That's when I use it most," said Mr. Gibson. "When it's too wet to do other work, I grind feed for the stock."

The climax of Mr. Gibson's lifelong experience with the usual belt sold for farm work came a little over a year ago. Down on his 320-acre farm near Lyndon, Ill., where he raises cattle and hogs and fattens them for market, he had been nursing a belt along toward the end of a feed-grinding job, applying tar for dressing, re-setting his engine frequently because of stretching or shrinking, losing power through slippage, keeping a weather eye on the sky, and hoping against hope that the plies wouldn't separate any more—until the belt just naturally, as he says, fell to pieces.

Then he bought a Goodyear Belt—a 50-foot, 6-inch, 4-ply endless Klingtite—built to be a help on the farm and to protect our good name. He paid a few cents more per foot for it than he had paid for the belt that lasted him through three troubled weeks, but he expected better service from his Goodyear Belt—and he got it.

To begin with, his new Goodyear Klingtite Belt needed no breaking in. It went right to work, first on wood sawing and then on feed grinding. Its daily performance, whatever the job, made its operating economy at first a marvel and then a matter-of-fact item on the Gibson farm. It delivered the full engine power, worked with a loose, free-swinging action that favored the engine bearings, neither stretched nor shrank, paid no attention to the weather, and never showed a sign of slippage.

In the first four months he had it, besides using it on the wood-sawing rig, Mr. Gibson ground 3,000 bushels of grain for his own stock, fattening 94 head of cattle and a carload of hogs. He also ground enough more feed to fatten 168 head of cattle and 195 hogs for two of his neighbors. At the end of the run, he could point to his Goodyear Klingtite Belt and say it still looked as good as new.

If you would like to know how valuable a Goodyear Klingtite Belt can be on your farm, as an economical long-lived working part of your power equipment, write to The Goodyear Tire & Rubber Co., Akron, O., for a copy of the Goodyear Farm Encyclopedia.

GOODYEAR
KLINGTITE BELTS

The AMERICAN THRESHERMAN AND FARM POWER



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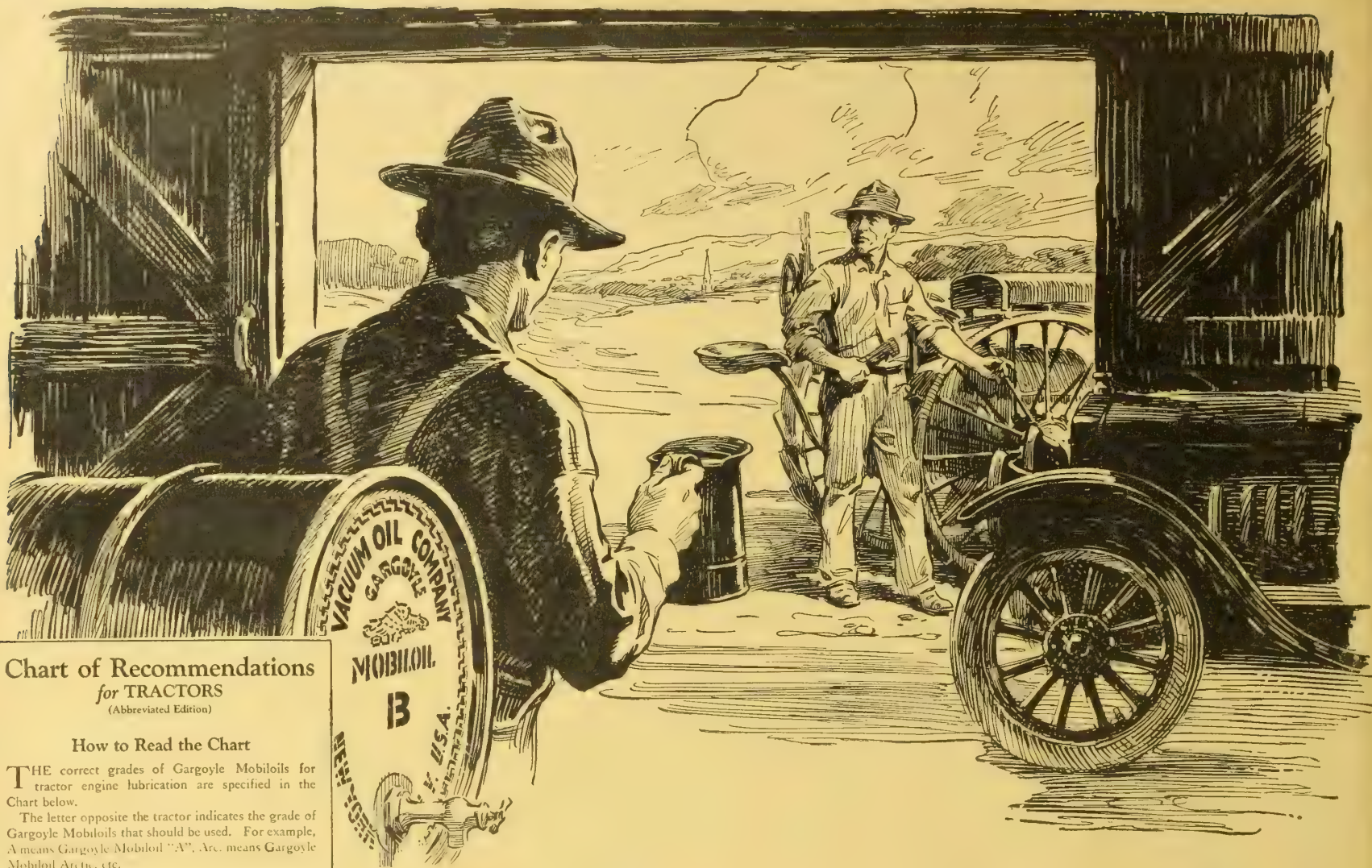


Chart of Recommendations for TRACTORS (Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

The letter opposite the tractor indicates the grade of Gargoyle Mobiloil that should be used. For example, A means Gargoyle Mobiloil "A", Arc. means Gargoyle Mobiloil Arctic, etc.

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloids are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to **Correct Tractor Lubrication.**

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

[illegible]

A Check-Rein on your Tractor—Why?

*How the full power of the tractor
can be put to work by scientific lubrication*

YOU can't do your best work in uncomfortable clothes. Your horses can't in ill-fitting harness. Their harness must leave them free to put their whole strength to their work.

Why let friction be a check-rein on your tractor? Excessive friction reduces power, increases the costs for fuel and oil, and wears out your tractor before its time.

Scientific lubrication *eliminates* excessive friction. The moving parts slide past each other easily. More power goes to the driving wheels or belt pulley, where it can do useful work.

The correct oil for your tractor is an oil not only

of the highest quality but also of the correct body to suit the operating conditions of your engine.

There is a grade of Gargoyle Mobiloils that will meet with scientific exactness the lubricating requirements of your tractor.

Gargoyle Mobiloils have been proven right under severe tests. Why not get the increased power and increased fuel and oil economy that scientific lubrication will bring? The red Gargoyle signs show where you can get the correct grade of Gargoyle Mobiloils for your tractor.



Mobil oils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safer to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC	New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
BRANCHES:	Boston	Pittsburgh	Chicago	Indianapolis	Des Moines

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, JUNE, 1920.

No. 2.

Threshermen I Have Known

By W. C. SMITH.

UNCLE GEORGE BEEMAN came over the other day and asked for some advice in regard to buying a secondhand threshing outfit owned by one of his neighbors.

"I can buy it for twelve hundred dollars," said Uncle George. "I'd like to have you go and look over. I am getting pretty old to traipse around over the country with a rig but we need a machine in our neighborhood and the boys have sort of got their minds set on this outfit."

"Who owns it?" I asked.

"Sam Stone," was the reply. "I reckon you know the rig pretty well."

I did know the outfit. It had been run but a few seasons. I had seen it operating during the last year and it looked like a dandy outfit to me. However, I had heard that Sam had trouble in getting work, rarely threshed the same territory twice in succession and seemed to be passing out as a thresherman. I asked Uncle George about this.

"You know how Sam is," he explained. "Great hand to fuss around and cusses everybody out when things don't go right. That don't suit folks. Sam has just about lost out and is willing to quit. Fact is, he just about has to quit because people have got tired of his talk."

I went and looked at the rig for Uncle George and found it a bargain. Sam was anxious to sell and when we came away the outfit had changed owners. Sam had virtually "cussed" himself out of business.

I remember going out with an expert one time who had been called out to assist a man in straightening out his difficulties. He was badly

out of humor when we arrived and had every one else in the same mood. Pitchers worked either too fast or too slow, something was going wrong all of the time and he even acted as if he desired to take a fall out of the trouble shooter.

His trouble was in plain sight. The bundle carrier on his feeder had been put on backwards and was dragging bundles under and doubling them cross-



Outfit Operated by A. C. Lambole, Brooklyn, Wisconsin.



A Full "Kid" Outfit.

the expert. "I came out here at your request. I am telling you what your trouble is. You can remedy it or leave it alone. That is your affair."

The captain of the ring stepped up.

"It is an affair that concerns us all," he said quietly. "Now, John, we don't give a darn how much you know or how much you don't but either get this outfit to running and quit bawling everyone out or take it away."

John got busy. He did not take his rig away but growling under his breath went after that bundle carrier. We all jumped in and helped and in fifteen minutes the separator was singing along like nothing had happened.

Now these two instances are not quoted as being typical. They are,

I believe, the two outstanding extremes that I have witnessed in fifteen years of active operation both for myself and for other owners, but a few years ago I had occasion to make a survey of the threshing business in my home county and I found one thing that particularly interested me. That was the fact that three or four men had averaged better runs than the rest of us and had been doing so for some time. Even when they had threshed no more bushels they were with one exception a day or two ahead of us in getting their rigs in the shed. I thought this might be due to local showers that might have stopped some of us while they went ahead, that working conditions or some similar condition might have been the cause, but I discovered that this was not true. I asked about one man in particular.

wise as they went into cylinder. My companion quickly told him about it, but did he change it? Not so you could notice it. He took the advice as an insinuation that he did not know how to assemble the feeder, which he had off to make some repair, and told the company man so. As the machine was idle, every one about the separator heard the harangue.

"Look here," said

(Continued on page 55.)



Fred Faust, Higgins, Texas, and His Red River Special and 20-Horse Power Russell.

Poor Roads Cost Good Money

By ORIN CROOKER

UNDOUBTEDLY farmers are yet to be found here and there who are not converted to the idea of hard roads, but this viewpoint is passing. For the most part, we believe, it is generally recognized that good roads benefit those living in the open country far more than they do those living in the cities. City people use the country roads for pleasure, mostly, and for only a limited time each year. Farm folks use them for business the whole year around. And business, as the old saying has it, comes before pleasure every time.

The change that comes over a community in regard to hard roads is well shown in an instance that has come recently under the observation of the writer. Some years ago he lived on a section of the country where extensive improvements of this kind were contemplated. It was proposed to build about one hundred and eighty miles of paved road in the county, a system whereby every town should be linked to every other town by a highway upon which an automobile or team with a heavy load could travel in any

weather at any time of year. Naturally, such a big project required a lot of money. It would be necessary, if put through, to bond the county for twenty years in order to pay the bills. And, even then, only the chief highways or main traveled

off the roads to be improved, objected to paying taxes which they claimed would benefit only those more fortunately located than themselves. The project, however, was put through and the work, though sadly delayed owing to the war, is at the

present writing nearly finished. The writer, who removed some time ago from that part of the state, chanced recently to meet a man from there. Naturally, we were interested in knowing what the farmers think now of the improvements in question, since a large portion of these paved roads has been open to traffic for from two to three years.

"Well," was the reply to our question, "there may be some left who don't favor the good roads, but they are using them and not making any complaint."

We think this is about the way it always is. After the

advantages of better highways come to be understood by actual use of them, opposition to such improvements takes wings and is heard of no more.

There is, of course, no one who benefits to

(Continued on page 58.)



The Beginning of Vermilion County, System of One-Hundred and Eighty Miles of Paved Road.

roads could be improved. The cry of opposition which went up when the project first was launched still resounds in our ears. Farmers whose land lay right on the roads it was proposed to pave protested against "mortgaging the future of their children," as they said. Others, whose farms lay

Hulling Beans

By IRA G. SHELLABARGER

IT is generally easy enough to grow any particular crop but sometimes it is quite a different proposition to harvest and garner this crop in the best possible manner and in the shortest time and yet save the entire crop.

Sometimes with some farm crops considerable loss is encountered because the best means of garnering the crop are not employed and after the grower has exerted every energy to produce the crop it is fallacy not to care for it correctly.

At different times more or less navy and soy beans have been grown on our farm and after they were cut in the case with the soys and pulled with the navys, and safely stored in the barn, then the rather difficult task of hulling the beans was confronting us and sometimes it was quite awhile before the beans would get attention. They were put aside for a rainy day job and if there were a considerable quantity of beans to hull, the task became an irksome one to even think about.

Occasionally the beans were put on the barn floor and a horse used to tramp out the beans. This procedure, of course, was to allow the horse to tramp over a quantity of beans and with a fork work over these stalks and sweep up the beans thus hulled and the process repeated from time to time until all the beans were hulled.

At other times, the bean stalks were placed on the barn floor and the beans hulled by a flail, the process and effect being the same as with the horse.

Then again if a small crop only was to be hulled they were tramped out by the boys and men.

Of course either of the above methods mean hard work and all the beans may not be secured and it is at least unpleasant to think about and if anything like a large crop of beans is grown, some other and more satisfactory method must be employed.

A plan that has been tried out on our premises, of hulling the bean crop when a fair sized crop has been grown, is to use the tractor and six-roll corn husker.

Our method is to pull the beans and place them on small piles a few feet apart and allow them to lie in the field one or two days (if there is not threatening weather) to allow them to partly dry out. They are then hauled to the barn and sometimes run immediately through the husker, and, again, they are all hauled in and then left to dry out thoroughly.

The bean stalks, of course, ought to be dried out and then the job is well done and few beans are cracked or broken.

The hulled beans run out the shelled corn elevator and the hulls and stalks go out the blower.

The husk rolls and corn elevator are disconnected, as there is no need of their running, and the husk rolls are set as wide apart as possible and the engine throttled down quite slow and the beans are fed into the husker slowly and it is a delight to thus hull beans.

The beans are run into bags and when through hulling they are run through the fanning mill, using the largest riddles and in this way all broken stalks and chaff are blown out and little hand picking is necessary.

After the beans are run through the fanning mill they are thinly spread out in a granary that they may not heat.

The procedure of the soy beans is the same as with the navy beans in that no hand picking is necessary to get them ready for market.

However, if only a small crop of beans were grown it would hardly be practical to employ the tractor and corn husker to hull the beans but where considerable of a crop of either kind of beans or cow peas has been produced, we have never seen a device that will do the work so nicely and quickly. Then, too, this is another place where the tractor can find work.

Let the Truck Do It

FEW men are successful in combining threshing with dairying. Any farmer knows that either line of work is able to swamp a man during the rush days of August and September.

Lately we journeyed southward to Monticello, Wisconsin, and learned some interesting facts from a man who has combined these two arduous lines of work. For eight years, H. C. Klassy, Jr., has led this dual life. Last year he threatened to leave the threshing game, in order to make life a bit easier; but seven neighbors combined to buy a seven-eighths interest in his outfit, and now he operates a machine in which he owns one-eighth instead of the whole interest.

The last two years have been most strenuous. Mr. Klassy gives highest credit to his good wife, and says she and her fine cooking have made it possible for him to thrive. After Mrs. Klassy comes his International truck, in his esteem. Just now, Klassy can hardly remember how he managed to get along before he acquired it. He hopes to own a truck as long as he farms and threshes. Although he was one of the first tractor buyers in his section, and is an authority among his neighbors on such matters, he told the writer that he would rather do without his tractor than his truck.

Milk caused the purchase of the truck. No doubt milk paid for it. Mr. Klassy lives on a high, rolling ridge some three miles from Monticello, and he had difficulty in getting milk to the condenser quickly and regularly. He faced transportation over a combination of hill and plain, of miry dirt and smooth, hard-surfaced roads. When a man owns one hundred and sixty acres of valuable land, requiring daily attention, he can't spend all his time on the road.

The International truck solved the problem. Shortly afterward, eleven other farmers in this section solved their problem of milk transportation by buying Internationals. Other farmers bought White, Reo, Republic or Ford trucks. Once these trucks were bought, the farmers found plenty of use for them when they were not scooting to and from town with the truck body full of milk cans.

Mr. Klassy, being a custom thresherman when he bought his truck, in October, 1917, found it a great asset in the threshing business. His fuel had always been secured at Monroe, the county seat of Green county, nearly fifteen miles away. With his truck, he was able to take his milk to Monticello, return for his five oil barrels, each with a fifty-five gallon capacity, and then make the round trip to Monroe before noon. In this way, the fuel problem was solved. When his separator was on the move, the truck was competent to bring all needed supplies to the field.

Monticello, as a community, consumes all grain raised there. The lumber and grain dealer, who

does practically all shipping, told the writer that in sixteen years not a carload of grain had been shipped from that city. About four-fifths of all grain raised in this section is oats, and it is all fed to the big herds of Holsteins and other farm stock which dot the pastures of every farm. This means that little hauling of threshed grain is nec-

station. Mr. Klassy, we have said, is a thresherman. He averages thirty threshing days a season. This is six days more than the run of the average Wisconsin thresherman. Mr. Klassy practices some of the virtues usually preached by others. His outfit is equipped and ready for thirty days of work before it leaves his barn-lot. Each evening

of the season finds the machine ready for the next day's threshing. As a result, Mr. Klassy threshes on consecutive working days. Only Sundays and rainy weather can lengthen his threshing season. For several years he has threshed over forty thousand bushels of grain, four-fifths of which has been oats. This means an average day's run of almost fourteen hundred bushels.

To do this work, Mr. Klassy has used but one separator—an Aultman & Taylor separator, size 32x52. He speaks highly of this separator and does not hesitate to crowd it. In eight years he has not had to re-babbitt the cylinder boxes; and, from present signs, he may not re-babbitt for eight years more.

Mr. Klassy believes in having plenty of reserve power at the belt. His record of tractors used is strong evidence of this. Just note how he has increased his tractor horse power rating with each change.

In 1912, he used the 12-20 International tractor of a neighbor with his separator, then new. The next season he bought an International 15-25. In 1914, he exchanged this as partial payment on a Mogul 25-45, which he used for three seasons, until 1916. Still Klassy, like Cæsar, longed for more power. He bought an Avery 40-80, which he still uses, not only for belt work but for hauling.

In his change of tractors, Mr. Klassy found he was getting too large a type for his kind of field work. So last year he bought a Fordson, which has furnished the field power necessary to supplement his big Avery.

Now this discussion of Mr. Klassy's machinery has no close connection with his truck; but it was impossible for a visitor to see the truck and not the tractors. As one approaches the Klassy farm, not a farm machine is in sight. All are carefully housed. The separator, the big Avery and the little Fordson, the truck and corn shredder all nestle contentedly in a shed, twenty-four by fifty feet. This shed cost Klassy just one hundred dollars, due to a

good purchase of lumber and by dint of doing all hauling and labor himself. When it was built, in 1914, it could have been secured through a contractor, with all hauling and labor included, for two hundred and fifty dollars. Just figure a bit on the value of the machinery we have mentioned. Divide two hundred and fifty dollars by six. After paying himself for his labor, Mr.

(Continued on page 65.)



Mr. Klassy Has Backed His Truck from the Machinery Shed to the Granary. Notice His Extension Side-Boards.



Ready to Leave for Town. Twenty-Three Hundred Pounds of Oats Are Loaded on This Fifteen Hundred-Pound-Capacity Truck. The Oversize Tires Make This Over-Loading Possible.



Bad Roads Make Hard Driving. Klassy Has Pulled Through One Mile of Muddy Road. He Will Reach the Hard Surfaced Road in One Hundred Feet More of Driving.

essary. On May 19, Mr. Klassy brought twenty-eight sacks of oats to town, but he sold them largely to accommodate the grain dealer, who needed them for a local customer. All Monticello farmers hold all their threshed grain; for this reason, in this section the truck is not called on to perform the grain hauling that is done in Kansas, for example, where much of the grain is hauled direct from the field to the elevator at the nearest

Wanted—Male Stackers

APPLY TO THE MIDDLE WEST

KANSAS has too much wheat or too few freight cars and elevators. This is the embarrassing situation as our banner wheat state faces the problems of the 1920 harvest.

Last year Kansas produced the tremendous total of 146,000,000 bushels of winter wheat. The nation and the outside world had clamored for wheat, and Kansas had stirred herself to produce wheat.

She did nobly. In fact, she did almost too well. She has today 20,000,000 bushels of last year's great crop lying traffic-bound within her borders.

"Very well," you say, "we must have a storehouse for grain somewhere. Why not let Kansas store it? She seems to have done nicely."

For the past eleven months, Kansas has done nicely. Yet Kansas is an agricultural state. She produces the grain on which the industrial centers of Detroit, Liverpool and Lyons feed. Her problem is production. She does not, like ancient Egypt, store for seven years, to guard against a lean cycle of seasons. When the new harvest rolls around, her elevators and bins must be cleared. Her golden store must turn over at least once a twelve-month.

Kansas did what the world expected of her. The railroads fell down on the job. Today they stumble toward a crisis, not only for themselves, but for the grain-growing states of the Middle West. Not only have they failed to get the grain out of this section, but they have failed to bring in the coal that enables the big custom threshing outfits to run to capacity. If the farmer, on July 4th, finds himself with his granary and his local elevator full of last year's wheat, with no freight cars to receive his 1920 crop, and possibly with no coal to operate the engine which must thresh his wheat, he finds but one solution of his problem. He must stack his wheat.

On the eve of harvest, Kansas faces a shortage of real, he-man stackers. The old ladies of both sexes have offered various futile suggestions, but the Kansas farmer knows his problem. He and the elevator man have been waiting long for promised cars. They have not come. On the present Board of Agriculture estimates, 110,000,000 bushels of wheat will be looking for a safe resting-place within the next thirty days. There



Sweating in the Stack Makes Good Wheat.

are not enough granaries and elevators to bear the additional burden, and stacking is the only escape from the difficulty.

Stacking is becoming one of the lost arts. The war, which revived knitting, failed to stimulate the practice of stacking. The food emergency of 1917-18 demanded that we thresh the grain as fast as we could bundle it. This tended to eliminate what was regarded by many as a useless process in the link between sowing the seed and eating the bread. Farm power machinery has overshadowed the achievements of the farmer's bare hands and many of the men, who at one time built stacks to withstand all winds and rains, have taken their places beside the workers of the benches and forges; and many of the grand old army of stackers have passed to a richly-deserved retirement from farm work.

It is true, stacks can be built, but will they have the high firm centers, the smooth sides and water-turning powers of former years? So high an authority as J. C. Mohler, Secretary of Agriculture for Kansas, thinks not. Other men close to the wheat country agree with him, L. A. Fitz, Professor of Milling Industry at Kansas State Agricultural College, being one of these.

Perhaps you, who read this article, know of some former expert stacker who now hibernates in a city home or works in a motor factory. Perhaps with your encouragement he will offer his services in an effort to save the grain that seems in danger of being wasted. The threshermen of America might work their best and hardest, only

to find that the grain has been threshed to await a distant date for transportation, with no adequate storage facilities at hand.

The situation demands our old-time American farm courage. We need the old-timers, the men who took pride in building a full stack and a strong stack. With the Middle West short of cars, of coal for threshing and of bins for storing wheat, one thing can still be done: good stacks can be built and the threshermen, the farmers and the railroads can spread the harvest season over a longer period of time than in the past two years.

Let us hope the threshermen will help in this crisis. Recommend stacking where a known car shortage exists. Assist the wheat grower and the good stacker to get together. Make certain of this season's coal supply now. It may be another case of "bread upon the waters cast."

If the farmers can be induced to stack their grain and can find the skilled labor necessary for stacking, their trouble will be amply repaid. For many years, grain has been higher in the spring than in the autumn. This fact is due, not to market manipulation, but to the almost infallible rule of supply and demand. The supply has always been greatest just after harvest.

Individual instances of 1919-1920 proves that this rule still holds true. Last year H. A. Nichols, of Woodson County, Kansas, could not get cars for shipping his wheat. He stored his 1919 crop in a wooden granary, built for such an emergency. He pursued a "watchful waiting" policy toward the car situation. Grain advanced in price. Finally, this spring, when he was able to secure the cars, his grain sold for \$2.70 instead of \$2.00 per bushel. The profit more than paid for the original cost of the granary, and Mr. Nichols is protected against any recurrence of this shipping situation.

Not every farmer can build new bins at this time, yet nearly every farm possesses some old outbuilding that, with few alterations, could be used for storing wheat. If stacking is entirely out of the question, the wheat grower will do well to prepare this building for unusual conditions.

Stacking will not solve the storage problem permanently but it will prevent the tie-up that is sure to take place if most farmers of the Middle West attempt to thresh from the shock and then ship to the nearest market. Grain must sweat sometime. This is a good year to have it do its sweating in the stack. Furthermore, it will save considerable sweating on the part of the railroads and elevator men.



The Binders Are Gaining Daily on the Railroads of Kansas. If the Wheat Can't be Stored, It Must be Stacked.

TEXACO GAS ENGINE OIL



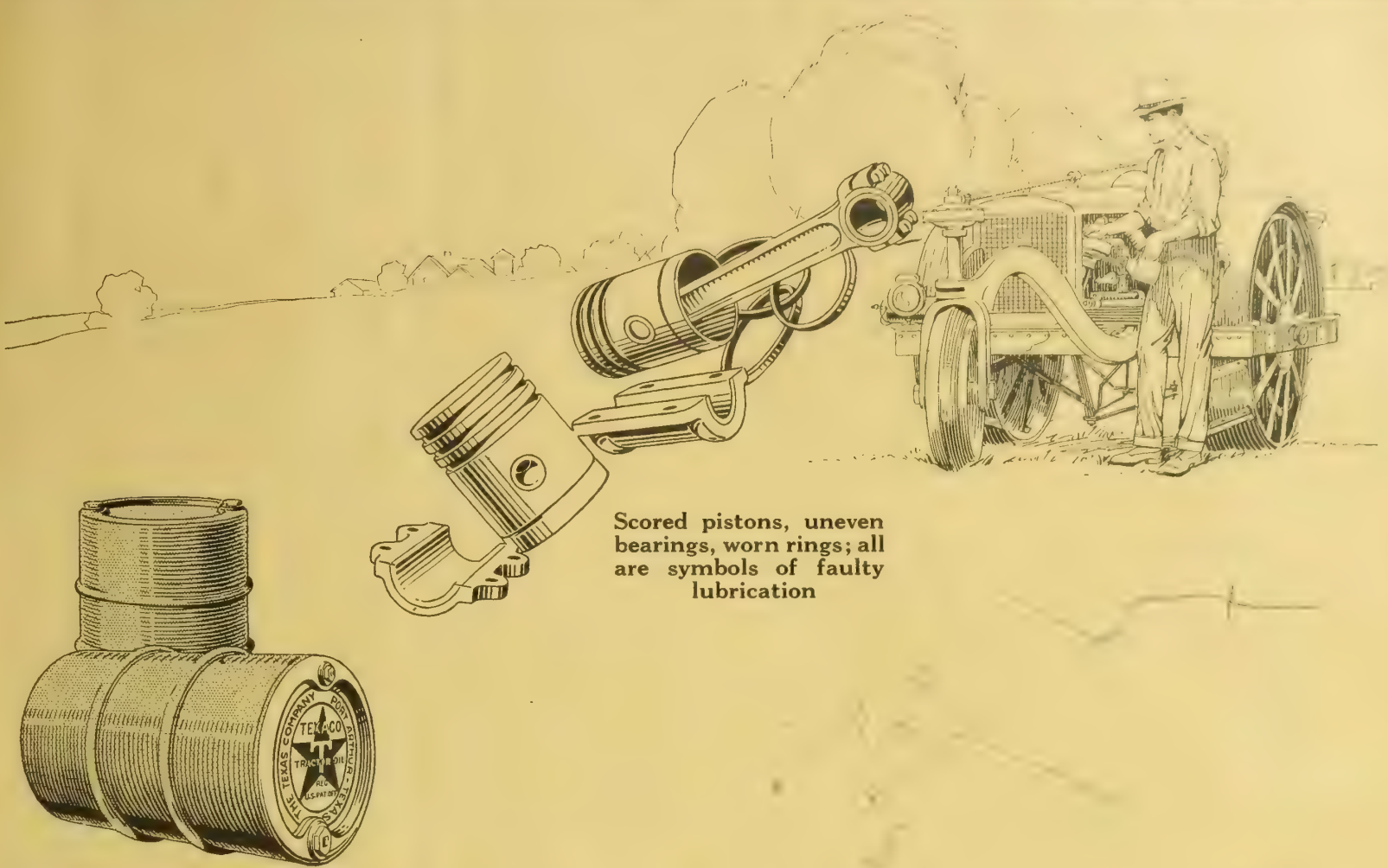
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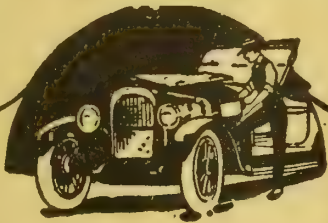
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Scored pistons, uneven bearings, worn rings; all are symbols of faulty lubrication

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TRACTOR OIL



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The greatest foe of the tractor is friction. The toll it exacts is seen in the little scrap heaps that so peacefully repose in repair shops, against tool sheds, and in farm yards. Scored pistons, uneven bearings, worn rings; all are symbols of faulty lubrication. Surely this is a high price to pay for the lack of a little care and it is all the more deplorable because a little judgment in the choice of oil and some "system" in using it will pay over and over again. Choose a quality oil like TEXACO and use the grade recommended for your type of tractor. Oil as often as your instruction book directs. Then you will be sure that a sturdy film of oil is amply protecting every working part. You are sure then that wear is kept down and power increased. TEXACO TRACTOR OIL is shipped in 55-gallon and 33-gallon steel drums, wooden barrels, half barrels, and 5-gallon drums.

THE TEXAS COMPANY

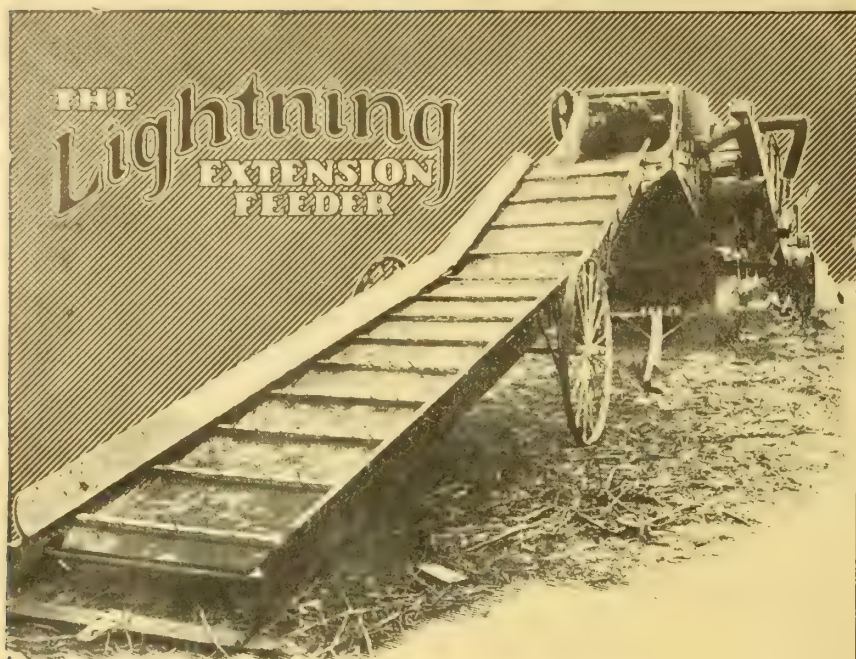
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The Lightning Extension attached to your self-feeder will give you the biggest run you ever had—and with less men. Fits all makes and is easy and convenient to handle.

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Mention The American Thresherman and Farm Power

Aunt Malinda

I'VE been on the jump most of the time since I landed back in dear old Wisconsin, with its cold winters and cool summers and refreshin' breezes and all else that brings health and happiness to some and rheumatism to others, and I've hardly had time to say my prayers.

Speakin' about sayin' prayers, I thought we were goin' to have a revival meetin' sure enough right here in Madison when Silas come home from Consistory t'other day with Bill Campbell as full of religion as he was full of mint julep the time Silas lied to him so beautifully about a perfectly coolin' draught, which Silas assured Bill was as harmless as a dove and invigoratin' to the core. This happened 'way back in the days when I used to drive "Maggie," the most stylish horse in Madison, and Bill boarded her in his "horse emporium" a few blocks from our house at sixteen dollars a month, includin' delivery twice a day, bringin' her and comin' after her when I'd finished my drives.

Bill Campbell is now a thirty-second degree Mason, the same as Silas and most of the gang at the office of the men persuasion. Bill Campbell is not only a wag but he's the most entertainin' wag in Madison and besides all the other "dubbin' and creatin'" he got in Milwaukee, his class created him the "clown of Freemasonry," and he bears his honors well. But Bill was in no clownin' mood that week. He sprung a leak in his weepin' machinery early in the game and had to send home for more handkerchiefs, so Silas 'lowed. Before I forget it, with all his worldly experience, coverin' most fifty years, I want to exonerate Bill Campbell from knowin' anythin' about mixed drinks beyond those of the lemonade density. He can look a horse over at one glance and tell whether it's "a little weedy," or a stump-sucker, and he can deal twice from the same deck and cause others to "read 'em and weep," while he looks as unconcerned as a heathen Chineese, but he ain't even bridle-wise on real drinks or he'd never have allowed Silas to "salt the mine" and get him outside of a mint julep a la Charley Kirch, two jiggers strong, that sent Bill off the stage groggy inside of two rounds, and him as innocent as a child, all because he believed all that Silas said about anythin', from drinks to religion.

Well, when these two old cronies come canterin' up the street in the "Night Crawler Special," with Bill talkin' and actin' that stained-glass, everybody-kneelin' conversation that Silas's Texas niece tells about, I says to myself, "I wonder if Silas has got Bill inoculated with that which used to make Milwaukee jealous, as well as 'goat-ridin' of the mountain-sheep variety." But, no, sir, it was the real old religion percolatin' from every pore and, what's more, the vaccination seems to 've taken in Bill's case, and I said "Praise the Lord!" Now if Bill could get Silas inoculated with a few shots of this kind of hops that'd hold over forty-eight hours, I'd feel more thankful still.

This is a mighty strange world in many ways. There isn't a more tender-hearted, God-fearin' soul in Madison than dear old Bill Campbell. He'd divide his last crust with anybody and then make fun of the way they munched it. He'd tell his experiences, from runnin' the ticket wagon of old Popcorn Hall's circus to tradin' horses with the gypsies, and keep you roarin' all day and half the night, but you couldn't bait the trap, no way you could fix it, to get him into a big meetin', but here he goes and pays a hundred and fifty dollars for what he says is worth a hundred and fifty thousand dollars, and comes home with the grace of God shinin' in his face like a pewter plate in a mudhole, and preachin' the "Brotherhood of Man and the Fatherhood of God" daily, and practicin' it, too.

If they hadn't squeezed me down to usin' a measly half page of space to tell a ten-page story in, I'd tell you more, but I'll have to let you guess the rest. When I get caught up with my work and the shortage of paper is overcome, I'll tell you of a few others, whom some of you know, who might do well to emulate the example of William Campbell, who hasn't an enemy in the world. But, law sakes! How he can stack a deck of cards and tell the good points in a horse at sight! I think it must 've been these qualifications in Bill that appealed to Silas so much in the days gone by.

Some time, if I don't forget it, I'll tell you how Silas recovered thirty-five dollars by proxy, which he'd paid for learnin' some of the curves in a certain game known as "deuces wild." Silas received a telegram while he was in California in 1912, which read: "Me and Bill Campbell recovered your lost wad last night and a little salvage on the side. Your lovin' son, Frank." (Collect, one dollar and thirty-five cents.) Silas couldn't understand where it profited him anythin' to get this expensive information.

"Why," I says, "it's a sort of Christian Science way of gettin' back what you've lost."

"Yes," Silas says, "I caught a big yellow bass t'other day and had him right up by the side of the boat when he bade me good-day and departed with my three dollar Dowagiac minnow. I've tried to imagine that bass in my landin' net many times but that don't get me anywhere in relatin' the facts nor in tryin' to feed my friends fresh fish."



A Common Sense Attachment for Threshing Rigs

The idea of the Automatic Blast Regulator was hatched in the brain of a practical thresherman. It grew out of a real need for a device that would regulate the air flow to the sieves at all engine speeds.

For an even and steady blast is the very foundation of a good threshing job. Too much or not enough means either a waste of grain or poor cleaning.

Suppose the engine picks up speed perhaps because running a trifle empty. The volume of air immediately goes up, too, and grain is blown over. If through slugging the engine runs abnormally low, then the air flow, being also lowered, is not strong enough to lift the chaff from the grain. Poor work results.

The Automatic Blast Regulator, attached to the fan shaft, will prevent all trouble of this sort. It automatically opens or closes the blast boards at the first sign of a change in the pace.

All you have to do is to adjust the blast to the kind of grain you are threshing. This can be done with one finger and can be changed as often as you wish while the machine is in operation. The indicator will tell you when your machine is running at its right speed.

With the first order from any county we are giving exclusive agency rights for that county, and until there is an agent appointed there we will sell to any one at list price, less the agent's commission, but we want agents—actual machine men who will push our proposition.

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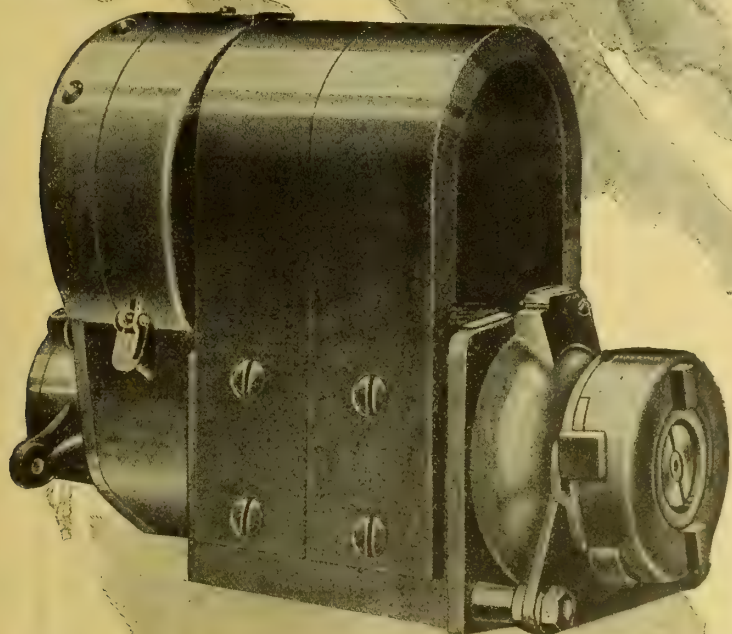
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Two Years.....	\$1.50	Five Years.....	\$3.00

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We guarantee every subscriber against loss through dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned The American Thresherman and Farm Power when writing the advertiser.

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A PAGE WITH THE EDITOR

THOSE brethern who have not already done so should get their threshing outfits in tip-top shape ere the season begins, when there will be no time for tinkering around.

"How much am I offered for the Presidential nomination," and "How are you going to pay back the contributions," are the questions for Uncle Sam to consider.

ALL those "Meridith the Man for President" circulars are a waste of raw material. Mr. Meridith, as an educator, should know that he chose the wrong road to Dublin when he became a democrat.

IN this trying and crying hour of the nation's need, let us pray that we select a President who is willing to consider the views of his cabinet and not run the country on a strictly one-man-power idea.

WHEN a million more men are willing to help produce the crops of the nation and a few hundred thousand lazy devils are willing to work more than half a day for two days' pay, we'll begin to solve the question of supply and demand.

THE public roads must be used as public highways and not with the thought single of the automobile interest. Shut out the traction engines and you won't have any need for automobiles in a few years. Sort of let this fact percolate through the concrete of common sense.

WHEN the road officials of the country get down to common sense, instead of trying to legislate a portion of the people from the highways in favor of another portion, it won't take long to settle the question of how to use the roads to the best advantage of all.

OF course it would have been cheaper—much cheaper, from a financial standpoint as well as in many other ways—if we had spent a few more billion dollars in electing a business man for President instead of a school professor. It's not the original cost of a Presidential campaign that counts by comparison with the up-keep afterwards.

THE supply of food, in fact, of all farm produce, is growing less in comparison with the demand, and we are falling short on the supply. It's a case of save now or suffer later with everybody unless the country produces more farmers and fewer loafers.

WHEN it comes to junking ships at scrap-heap quotations, we seem to be the original "Three Ball Solomons" of the maritime world. Next March we'll be junking a lot of shop-worn politicians, let us hope—and pray.

THE thresherman who objects to paying two dollars or even ten dollars a year for dues in his state organization is the fellow who is willing to pay two hundred dollars for a "lightning-rod" contract with somebody whom he never saw before.

IF we had only known as much about the paper situation twenty-three years ago as we know now, what a difference it might have made all around. Then it was a question of having anything to print, now it's a question of having something to print on.

THE way to help put a stop to the outrageous charges which have been boosted sky high by unscrupulous speculators is to stop buying. Wear your old clothes as long as they will last, make a little sacrifice in doing without sugar or any other article when it goes beyond reason. A dull market will bring the prices down quicker than anything else.

THE Editor personally would receive no benefit if all the users of farm power machinery were carrying compensation insurance. The Editor has taken out compensation insurance in protection of himself and his employees and has already received protection in the case of at least one employee who was injured entirely outside of his regular duties. Indeed, his injury was caused by cranking a car, which was no part of his business, yet justice, equity and humanity suggested that he receive the benefit of the indemnity paid for by our concern.

Just a few days ago an employee of a policy holder in the Threshers' National

Insurance Company, one of the companies which we helped organize, had the misfortune to lose an eye by accident. It was no fault of the policy holder whatever, but that did not help the boy who had lost an eye. If he had brought suit for damages it would almost if not quite have ruined his employer, who is a man of limited means. Inside of ten minutes after the proofs had been filed this boy had a check for close to two thousand dollars in his possession, without a quibble.

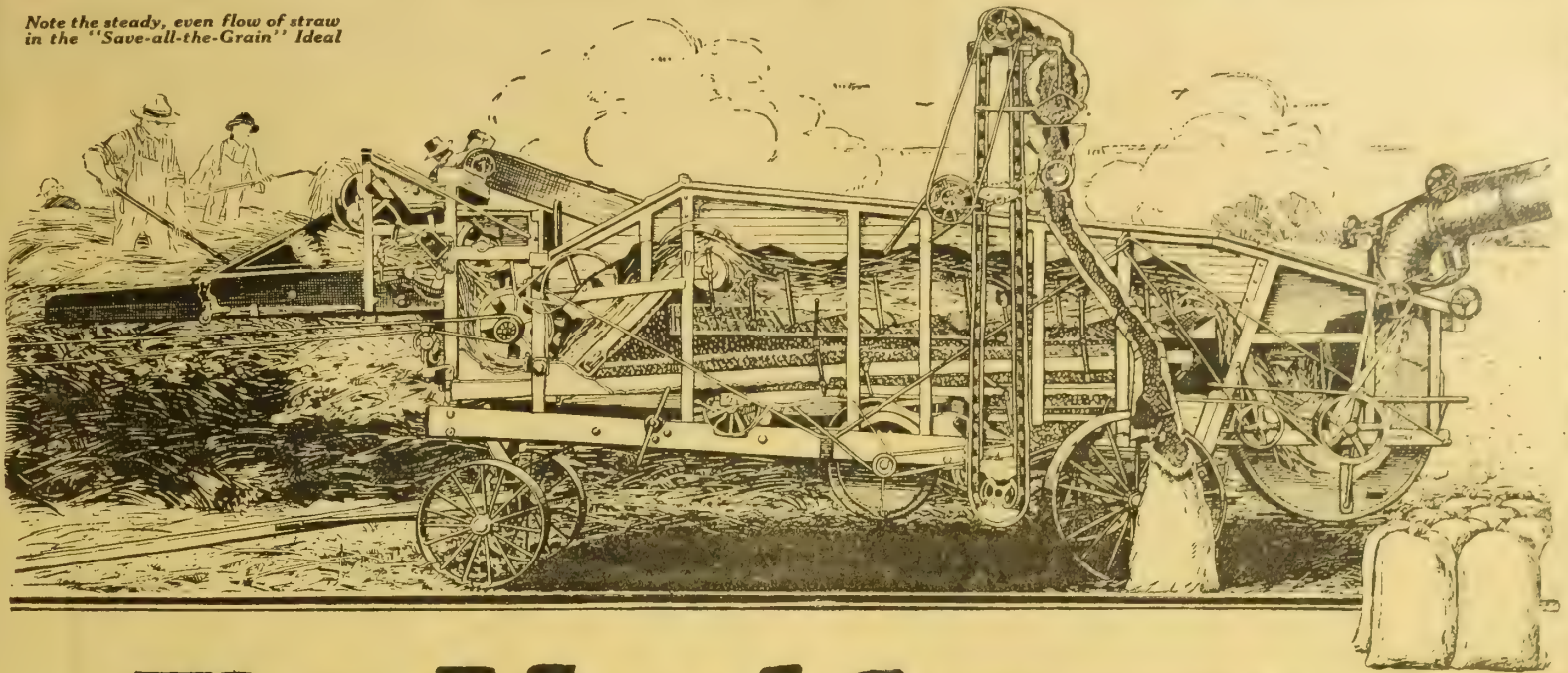
While a hundred thousand policies would not benefit this magazine one dollar, the satisfaction of having helped protect the employers and at the same time of dealing generously with those who meet with accidents of like nature, by urging the carrying of like insurance by every reader of this magazine who employs help, the satisfaction of having helped both sides in such a lamentable condition is well worth the effort.

You can't replace lost eyes or lost arms by insurance but you can, with a very small percentage of outlay, protect yourself and your own family by carrying such insurance and then, in case of accident, you can provide generously for the unfortunate ones who meet with accidents, and their name is legion.

JUST a few words to the benighted builder of trucks who thinks that the city is his only market. This same position was taken with reference to the farmers owning automobiles. As late as ten years ago the average automobile manufacturer could hardly be induced to listen to the facts about the buying power of the farmer in his line. Now the farmer is known to be one of the greatest factors in the purchase of automobiles. Indeed, they do not stop at "Tin Lizzies" but a goodly percentage of farmers buy the higher priced cars for their own use.

There is not a successful farmer of any considerable standing but who owns or very soon will own a traction engine or tractor. It is just as essential for him to own a truck, as many already do, and thousands more are looking for these commodious vehicles for their farm work. The truck builder who will investigate this field closely will learn much to his advantage.

Note the steady, even flow of straw
in the "Save-all-the-Grain" Ideal



The *Ideal* Separator Provides —

Greater Grain Saving—A special grate design, right behind and beneath the cylinder—the Ideal traveling rake that carries the straw from the cylinder in a *steady, even flow*—the Ideal straw rack, with its series of lifting fingers that tear the straw open, rake it, beat it from beneath, all contribute to compelling complete separation in the Ideal.

Cleaner Work—The extra large chaffer area, the adjustable sieve in the shoe and the Ideal system of wind control, guarantee a perfect job of cleaning without waste under every condition. The Ideal does the kind of cleaning that eliminates "dockage" at the elevator.

Larger Capacity—With the greatest grain saving device in the world the Ideal secures over 90% of the complete separation almost immediately after the bundles enter the machine. This, with the unusually long straw racks and the extra long sieves, explains its larger capacity.

Easier Operation—You don't have to crawl inside the Ideal to adjust and regulate the separator. All bearings, concave adjustments and regulations of the blast are on the outside of machine, also all oil and grease cups, where you can take care of them even while the Ideal is running.

Stronger Construction—The Ideal frame has no spliced or bolted members—it is practically a one-piece job—sills, posts, deck rails. It simply can't pull apart, sag or rot. This, with the heavy, substantial trucks, and all shaker hanger bearings running in adjustable boxes, gives a construction that insures long life.

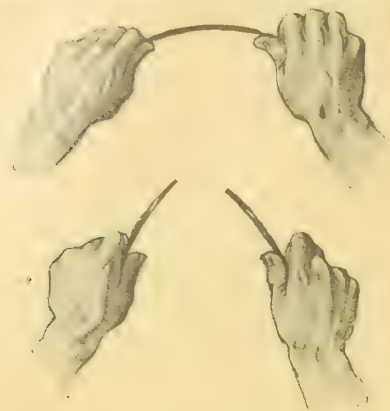
No Vibration—In the Ideal the cylinder is perfectly balanced and all moving parts are counter-balanced. This makes for steady, smooth running that eliminates harmful vibration, minimizes wear on the bearings, preserves alignment of shafts and greatly lengthens the life of the machine.

You have a choice of five sizes—22 x 36, 28 x 44, 28 x 48, 32 x 52 and 36 x 60. See your Rumely dealer or have us send you further information.

ADVANCE-RUMELY THRESHER COMPANY, Inc.
La Porte, Indiana
29 Branch Offices and Warehouses

ADVANCE-RUMELY





broken blades are not always poor blades

Starrett Hack Saws plus the Starrett Hack Saw Chart make it easier to cut metal economically. Ask for a copy of Chart "AM" and "Hack Saws and Their Use"—both are free.

THE L. S. STARRETT COMPANY
The World's Greatest Toolmakers
Mfrs. of Hack Saws Unexcelled



ATHOL,
MASS.

42-64

Starrett Hack Saws



The Morris Improved Beading Tool

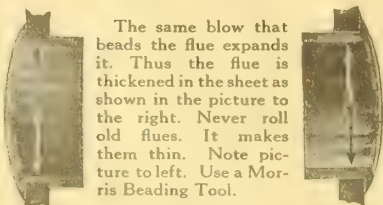
Be sure to give size of flues when writing for circular.

This tool enables a man who never had any previous experience to put new flues in a boiler, or repair old ones, and do a better job than an experienced boiler-maker can do in the old way.

Easy to Operate

Simply work the handle back and forth, and the tool automatically does a perfect job. Every lick is just the same as every other one. Works in corners same as anywhere else. All straight work.

Thickens Flue in the Sheet



The same blow that beads the flue expands it. Thus the flue is thickened in the sheet as shown in the picture to the right. Never roll old flues. It makes them thin. Note picture to left. Use a Morris Beading Tool.

Wallace Mfg. Co., Kansas City, Mo.

STUDY AT HOME Learn Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address
Clarke School of Traction Engineering
Madison - - - - - Wisconsin

Listen To Me

ANY WAY you look at it, partner, if you want the best of it always give the best of it. Clear conscience doesn't cause sleepless nights.

SINCE the day poor old Adam ate the Winesap, woman has been busy "vamping" poor deluded man. Now if Adam had eaten a lemon the chances are we wouldn't "fall" so easy for them.

"MUSIC hath charms to soothe the savage breast," but some of this twentieth century "canned" music would make a head hunting cannibal out of an otherwise peaceful citizen.

ON all questions concerning all the people, all the people should have a vote. It is too much power to give a favored few to be able to say what we shall or shall not do. On the other hand, the will of the majority on all questions should be unquestioned law.

SHOW me a man who doesn't like children and dogs, and I'll show you one whose nose and chin would make a nut cracker, and one who only goes to funerals so he can cop off the money from the dead one's eyes when the mourners are not looking.

THERE is nothing in the world like a true friend. He is with you when you are down as well as when you are up, and when you find one like that you have something that is far more desirable than all the money in the world. He will go farther with you than the money would.

UNCLE Billy Bryan says he is not out for President. We thought he would come to that conclusion after letting his mind drift back to what the people thought along those lines. Having expressed themselves very clearly on the subject, we had concluded the incident was closed.

OPPORTUNITIES are the children of perseverance and honesty; they don't just happen, they are made to happen. Try to make one for yourself and you won't have to be lying around waiting for congress to do something.

IWENT to a boxing match one night. Most of the audience were laboring men. It came to me that if they spent the same amount of time going to night school or taking a correspondence course the result would greatly add to the solution of wage difference. I'm not knocking boxing, but simply stating a fact.

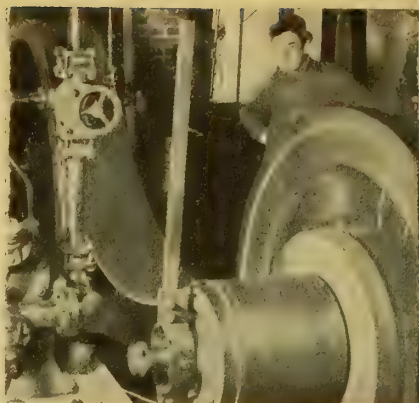
AMAN never gets so old nor so smart but what he can learn even from a little children. From them you can learn trust. Their existence depends upon their trust in you. If grown ups would cultivate trust in stead of distrust, a great many difficulties could be overcome, in fact, they would be taken care of before they happened.

WOMEN of the old days wore clothes to conceal their various charms. These days they hardly leave anything to the imagination. Maybe competition is the cause of it. I saw one the other evening who was so overexposed and underdeveloped that a change of conversation would have put the whole works on the bum.

RAILROADS under government control charging three cents a mile had a deficit of eight hundred million dollars. Under private ownership at two cents a mile they all made money. Under government control the railroad officials would not give you a pleasant look. Under private ownership you can get all the information you ask for. Like Postum, "There's a reason." Political pull vs. efficiency.

THIS soldier bonus proposition that a few "squawkers" are knocking and trying to sidetrack can be passed and the money furnished to pay for the same if senators and congressmen are compelled to pay for using the mail which they use to keep their political fences up. Why should they have free use of the mail system and these boys who have earned all that we can give them do without a start in life? Which is more important to the country?

DON'T get in a "rut" and stay there. Anyone is liable to have a little hard luck that happens through no fault of his own but it is his own fault if he doesn't fight his way out. Curl up and quit and everybody "lays off" of you, but tear into things and you will always find "oodles" of fellows pulling for you and helping you along. Don't be yellow, but spit on your hands and dig in and you will be all the better for "coming back."



Like a Team of Percherons

Did you ever see a big team dig in their toes, drop their hips and irresistibly move the load out?

That's the way a big belt running slack with Cling-Surface looks.

You can't make it slip. The more the load the more she drops her quarters and grabs hold.

It's no mystery. Cling-Surface keeps it pliable and in vigorous health and then stops the slipping instead of using tension for the purpose.

The rest follows. It's bound to. But only Cling-Surface will do it—you've never done it with anything else.

Buy it in 1, 5 or 10 lb. tins from your dealer or from us—Ask us.

Cling-Surface Company
1070 Niagara St. Buffalo, N. Y.

Mention The American Thresherman and Farm Power



Keep One Handy

It is only a question of hours or days when your covered pulley will give out while in the midst of a job. Why not order the Vacuum Non-Slip Pulley now and have it handy to slip on the shaft when your other pulley goes bad?

The Vacuum Non-Slip Pulley is made of cast iron, needs no covering, will last a lifetime, keeps belt clean and cool, saves power and money.

Write today for descriptive circular, prices and testimonials showing that this patent pulley pulls even better than a lagged pulley.

Vacuum Non-Slip Pulley Co.
1811 Arcade Building
St. Louis - - - - - Missouri

The 1920 fair dates are given on page 28



Be Sure It's a Sawyer Belt

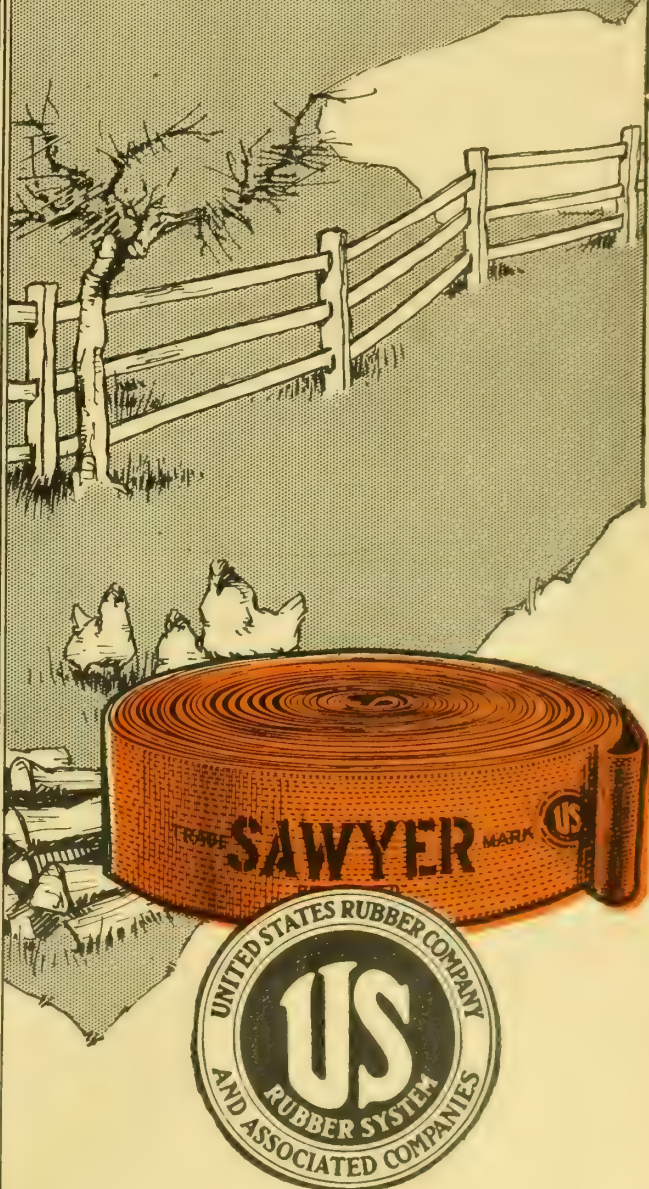
YOUR separator is no better than its belt. A *Stitched Canvas Belt* keeps your separator humming when every working hour is precious.

Your main drive belt will have to carry a terrific load. Be sure it's a *Stitched Canvas Belt*—recognized the best type for farm use.

For 30 years power-farmers and threshermen have depended upon the Sawyer Belt for hard work. It's not harmed by climatic conditions or moisture, and the special reinforcement stitching reduces edge-fraying to a minimum.

In completing your equipment for heavy threshing see that your dealer gives you the genuine *Sawyer Stitched Canvas Belt* stamped with the "U.S." seal. We recommend *Sabeco Belt Dressing* and pack a liberal sample with each Sawyer Belt. The dealer also carries the full line of "U.S." packing, hose, rubber belting and other mechanical rubber goods for farm use.

United States Rubber Company



Standard for
over 30 Years

SAWYER TRADE MARK *Endless stitched canvas Belts*
REGISTERED



Solid Belt Dressing

IT'S easy to keep belts from slipping. All it takes is a little common sense care and a good belt dressing.

But be sure to pick the right dressing—Dixon's—and stick to it. For a poor substitute is worse than none at all.

Dixon's Solid Belt Dressing keeps the belts in good working condition. Its good properties preserve the fabric and its pliability, prevent slippage and make for better transmission.

Comes in handy bars, easy to apply. Try it—not to please us but to be pleased yourself. Free sample on request.

Write for booklet, No. 22-O, "The Proper Care of Belts." It's mighty interesting.

JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, NEW JERSEY
Established 1827

Mention The American Thresherman and Farm Power



One Good Hot Spark in a little loose chaff and the fireworks begin. Many a thresherman has seen his savings for years go up in smoke in this way and not only the threshing outfit, but the customer's grain and buildings, too. Prevent this ever happening to you and your customers. The small cost of a

South Bend Spark Arrester

will save you from all danger of fire and the worry about the possibility of a fire. It will fit any engine stack and will not hinder the draught.

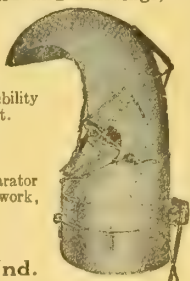
A South Bend Stacker Hood

places the straw where you want it and is easily handled by the separator man. It is sold on a make-good trial basis. If it doesn't do your work, you return it and it costs you nothing but your time in trying it.

Write for prices of one or both of these products.

South Bend Spark Arrester Co.

South Bend, Ind.



Mention The American Thresherman and Farm Power

"ELCO" Red Stitched Canvas Belts Give Perfect Satisfaction

Because they reduce belt slippage, make even cylinder speed and give greatest traction. They are pliable in all climates and under all weather conditions, are thoroughly stretched, cured and pressed and have a row of stitches every 1/8 inch across the width of the belt.

"Elco" Belts are made to satisfy those who demand the best

We have one of the largest stocks of leather, rubber, canvas and cotton belting in the middle west. OUR SERVICE CAN'T BE BEAT. We have a belt that will give the greatest service on your particular work at lowest cost. Every belt is guaranteed and our guarantee is backed by more than 47 years of square dealing.

You can save money by sending for our Free No. A-77 catalog.

B.F.GUMP & CO.

Established Since 1872

431-439 S. Clinton St., Chicago, Ill.

"ELCO"
B.F.GUMP CO.
CHICAGO

Mention The American Thresherman and Farm Power

Organization

Ohio Thresher Meetings

The Minster District Meeting was called to order by Tom B. Walker, sales manager of the Arbuckle-Ryan Company, Toledo, Ohio, on Tuesday, May 18, at the J. J. Dues Machine Company's hall.

This was one of the best district meetings ever held in Ohio, and over two hundred threshermen were present. Much of the credit in connection with this meeting was the interesting and instructive program which had been arranged by the J. J. Dues Machine Company, and the loyalty of the threshermen of that vicinity.

In the absence of the mayor, Mr. Walker gave a brief address of welcome, which was most ably responded to by our loyal friend and co-worker, J. B. Parker, of The American Thresherman and Farm Power, publicity department. Mr. Parker had a message for the threshermen, and they deeply appreciated his remarks. His words carry great weight with them, because they all know he is sincere in what he says and does and they believe in him. He is truly the "threshermen's friend."

Geo. Durban, secretary of the Ohio Brotherhood of Threshermen, then gave one of his very able talks on "What Has Been Accomplished for the Threshermen of Ohio." No one is more able to talk upon this subject than Mr. Durban, whom much has depended upon during the past few years and who has never been found wanting. He has well been termed "the watch-dog of the Ohio Threshermen's Association," and had it not been for his fidelity to the cause of the threshermen of this state, much hardship would have fallen to the lot of the threshermen. His remarks were followed very closely by all present and much good came from his talk.

After Mr. Durban's address, J. R. Smith, manager Minneapolis Threshing Machine Company, at Columbus, Ohio, gave the boys a talk that was followed very closely by every one present. Mr. Smith's long experience in dealing with the threshermen enables him to talk to them straight from the shoulder, and his talks are very much appreciated by the threshermen.

A rising vote of thanks was then given Mr. Dues for the very fine program which he had arranged, and he in turn invited the boys all back next year, and without a doubt all of the boys will be back and will bring with them many of their friends.

This report would not be complete without mentioning very favorably the music by a Jazz Band from Piqua, Ohio. Mr. Dues should surely be complimented on being able to se-

cure such an aggregation of stars, and their music did much to make the program most enjoyable.

This was a crackerjack of a meeting and did much good in the vicinity of Minster.

Auburn Meeting

According to the usual custom, the New York Brotherhood of Threshermen will meet in Auburn, July 2 and 3. This summer meeting usually rivals in importance the regular yearly convention held in the winter. Just before the threshing season opens, there are many things that threshermen as good business men should talk over. This meeting comes at a time of year when it is difficult for farmers to get away from their work for even one or two days. The fact that the Auburn meetings are well attended indicates that they fill a place of real importance in the scheme of things.

Don't forget the dates: July 2 and 3.

Marion Meeting

The Marion District Meeting was held in the Auditorium of the Y. M. C. A. building. Tom B. Walker of Toledo acted as chairman, and the Caledonia Public School Orchestra furnished excellent music.

This meeting was not as well attended as might have been possible had it not been that the farmers and threshermen were so busy planting their corn. This meeting was held on Thursday, May 20, and the weather was beautiful. After the very rainy weather we had around here, the farmers worked double time on that day, for which they can't be blamed.

The invocation was given by Dr. Linus Strook so the meeting got started right, anyhow. Mr. Strook is a real fellow and a scholar. He was most refreshing.

The Hon. F. E. Guthery of Marion then gave an address on "The Reconstruction Period." It was a gem all the way through and was surely most appropriate.

Mr. A. E. Fisher could not be present at this meeting and Mr. E. C. L. Barlow of the Huber Company gave one of the excellent talks we always expect of him. He is a clear thinker and his remarks always bear weight.

Mr. Barlow was duly extended a vote of thanks for the program he had prepared, and the kindness he had shown the boys. He responded very graciously.

After dinner Hon. J. B. Parker took the rostrum and gave us one of his old reliable, rousing, hair raising talks of which only he is capable. He is surely at home with the threshermen

and the assistance he lends them is beyond proper recompense.

Mr. Geo. Durban, Ohio secretary, then spoke upon "Insurance and Legislative Matters," and explained the details of the workings of both subjects in a most efficient manner. Mr. Durban should be elected secretary for life, for it will be most difficult to fill his shoes when he quits.

After the meeting, the Huber Company was kind enough to take the time and pains to show everybody through their plant. This was a treat the boys enjoyed and thoroughly appreciated.

TOM B. WALKER.

Meeting in Monroe

Every thresherman and farmer living in Monroe county, Michigan, should be in Monroe, June 21, to attend the meeting of the Monroe County Board of Road Supervisors, which will be held at that time.

The question as to whether tractors and other heavy farm machinery shall be allowed the use of the roads in Monroe county, Michigan, will be discussed at that time. The decision made by this board of road supervisors is of vital interest to every thresherman in Monroe county, and also to every farmer who has grain he would like to have threshed.

In a recent public discussion of this Monroe county road trouble, one of the county commissioners said that the farmers of Monroe county could thresh their grain out with a flail if the threshers could not do the work because of being unable to use the road. If you are a farmer in Monroe county, Michigan, and do not desire to thresh your grain out with a flail, we should suggest that you be present at the meeting June 21 and register your protest. If you do wish to put the threshermen of your county out of business and go back to old fashioned methods of getting your work done, by all means be present at the meeting and speak up for your side.

Organization and Insurance in Indiana

The plan adopted by the last state convention of the Indiana Brotherhood of Threshermen was put into immediate effect, and a County Organizer was employed and put on the job during the last week of March. The plan of county organization is to arrange for a meeting in each county; to notify the threshermen from the Indiana Brotherhood office, and have them also notified by the prominent threshermen of their own counties. They hold a meeting, elect officers, place their secretary-treasurer under bond, adopt county by-laws acceptable to the Indiana Brotherhood, and thus complete their organization. Previous to the beginning of this



—they never disappoint

What was the weakest part in your equipment last year? Was it your belt that was "out of step"? Then, that's where you want to strengthen.

You've heard of Gandy, of course. No belt with such an enthusiastic and nation-wide following could escape your notice. But have you ever tried it?

Gandy Belts appeal especially to those who take a pride in good equipment. Seems as if they were just made to order for them.

They're constructed to meet hard service conditions—

of closely woven cotton duck, folded, welded and seasoned in oils, which accounts for their great resistance to the effects of abuse and uncertain weather. They'll establish a new record for you in performance, economy and length of service.

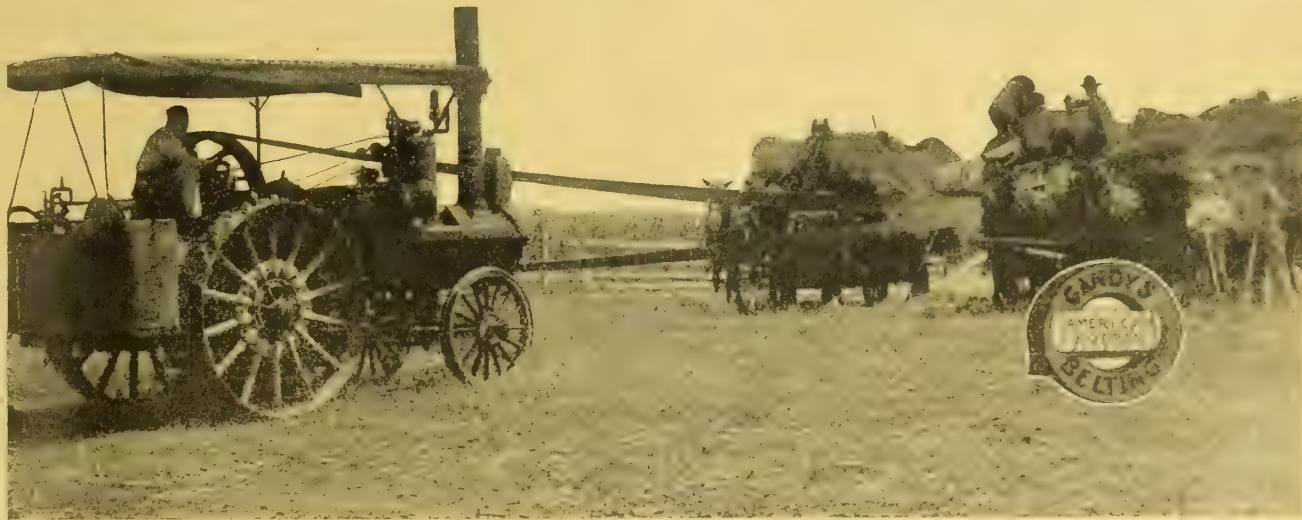
Gandy Thresher Belts have back of them forty years of honest workmanship—plus the knowing how to make the best belts for a specific purpose.

And Gandy engineers are ever ready to help with your belting problems.

Look for the Green Edge and the Gandy trademark!

The Gandy Belting Company, Main Office and Factory: **729 West Pratt St., Baltimore Md.**

BRANCHES: 36 Warren Street, New York City. 549 W. Washington Street, Chicago, Illinois



work the Executive committee of the Indiana Brotherhood of Threshermen prepared a model county by-law, and this by-law has been adopted in every case without question or without material alteration.

Mr. W. S. Arnold of Morristown, Indiana, has charge of this particular branch of the organization work. The meetings are scheduled for ten days to two weeks in advance, making them by round, just as political meetings are usually arranged. There are now more than fifty-five counties with complete organizations in every detail, and not in a single instance has there been the least hesitation in perfecting the organization according to the plans laid down by the Indiana Brotherhood. All the members in all of the counties where organization meetings have been held, and that is in more than half of the counties of

the state at this time, are very enthusiastic in their determination to keep the Indiana Brotherhood absolutely at the head of the list of state organizations, both as to quality and quantity of membership, and as to general organization matters.

All of the counties will be completely organized in every detail before the first of September. Our secretary, W. E. McCreery, is just as busy as a bee tabulating and carrying forward the reports and inquiries that come in, in regard to the organization work.

The Indiana Liberty Mutual Insurance Company and the Indiana Threshermen's Mutual Fire Insurance Association are also both having their busy season just now. This is the anniversary of the organization of the Indiana Liberty Mutual Insurance Company, and the way the

applications are coming in at this time indicates that there is a general disposition over the state to celebrate that anniversary by making the number of applications received during this week and the first of next week the greatest number which has ever been received during a like period in the history of the company.

The Indiana Threshermen's Mutual Fire Insurance Association has more fire insurance now than it has ever had at one time since its organization, and before the end of July the amount will be increased by more than twenty-five per cent. The threshermen of Indiana are realizing to the fullest extent what the benefit of the organization is to them and the great saving which the insurance companies are making for them, and we predict that it will be but a very short time indeed until more than

More
Service
for
Your
Dollars
The
Record
of the
Birdsell

BIRDSELL CLOVER AND ALFALFA HULLERS— THE BEST IN THEIR LINE

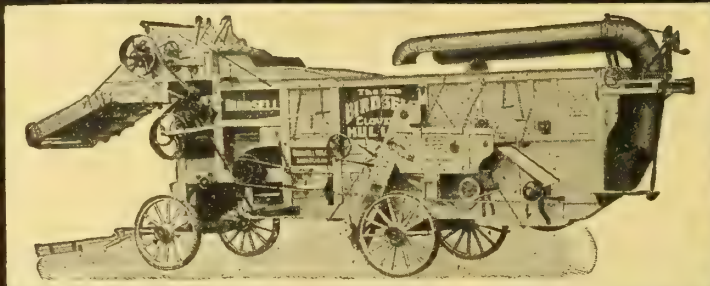
Read what this man says—

BIRDSELL MFG. CO., South Bend, Indiana

Dear Sirs:—I have a Birdsell Huller and it has been out in the field for 34 seasons. I show you a picture of it. It still has the first coat of paint on it, but I put on the blower myself some time ago and the feeder was put on last year and it run one season. There is nothing better than a Birdsell Feeder. I hulled clover seed with my Fordson Tractor pulling a Huller while the Steamer pulled my wheat separator. The Fordson tractor pulls the No. 1 huller easily in the field and on the road, and I will take my Huller and hull against any huller made and do a better job. Letters answered with a 2-cent stamp in it at any time.

LAWRENCE SEGER, Jasper, Ind.—Route 4

There are thousands of Birdsell Clover and Alfalfa Hullers that have records as good as this one. Economical in upkeep—the "Birdsell" is a profit maker



BIRDSELL MFG. CO.,
South Bend, Indiana

BRANCH HOUSES

MINNEAPOLIS
PEORIA
INDIANAPOLIS

KANSAS CITY
ST. LOUIS
COLUMBUS

TORONTO

Mention The American Thresherman and Farm Power

ninty-five per cent of the threshermen of Indiana will belong to the state and county organization, and hold insurance policies in both of the insurance companies organized by and for the threshermen of the state of Indiana and other states.

W. H. NEWSOM, *President,*
Indiana Brotherhood of Threshermen.

Kansas Has Road Troubles, Too

The threshermen of Kansas are getting more eager to do something for themselves in the organization line. Our insurance surely is a winner, and is being adopted in every local meeting of thresherman in the state. We make it a point to have a man there to introduce it.

We are beginning to realize that we shall be forced into fighting some road legislation in the near future. I wish you would print the following quotation from the Kansas City Star as a warning to threshermen in this section:

"The county court ordered O. C. Sheley, county highway engineer, today, to remove the front wheels of a large tractor abandoned in a mudhole on Blue Ridge road, about two miles north of Raytown, for evidence. The county commissioners plan to bring suit against the owner for damages done to about three miles of the road. The cleats of the machine cut deep gashes in the road. It is estimated that repair work on the road will cost several thousand dollars.

"The county spent fifty-thousand dollars last year repairing roads cut by tractors. The cleats break the "bark" of the roads,

causing it to "unravel." Roads damaged in that way, engineers say, must be resurfaced.

"Recently the commissioners asked to have the owners of tractors doing damage to roads arrested on a charge of destroying property and sued for damages."

My farm is within one mile of the proposed concrete highway going through this county on the Santa Fe trail. This proposed road will cost me about one thousand dollars, and unless we stand up for our rights through organization, I will not be able to take my tractor on it. To be taxed one thousand dollars for constructing a road, and then be prevented from using it, does not appeal to my sense of justice at all. The Kansas Brotherhood of Threshermen of which I am president, has for its purpose the fighting of the threshermen's battle in such cases as this. Every thresherman who comes into our organization helps make it that much stronger and more capable of demanding and receiving justice for the threshermen of the state.

J. T. KING, *President,*
Kansas Brotherhood of Threshermen.

Illinois Convention

The Tenth Annual Convention of the Illinois Brotherhood of Threshermen was called to order by T. I. Davidson, at the Armory Hall, Peoria, Illinois, March 2. The invocation by Rev. C. D. Williamson

was followed by the address of welcome by Attorney Robert Schultz. This address was responded to by Attorney T. C. Buxton of Decatur, counsel for the Illinois Threshermen's Mutual Insurance Company.

W. E. McCreery, secretary and treasurer of the Indiana Brotherhood was present and gave an excellent talk on organization. Joshua Bohanan of Louisville, Kentucky, president of the Kentucky Brotherhood, made a few general remarks on "Starting Organization both in the home state, and other states." After a short talk by W. H. Newsom, the program for the rest of the evening was turned over to the representatives of the manufacturers. J. O. Talley of the Russell & Company, gave a general talk on coöperative business as applied to threshermen and the manufacturers. W. O. Kira-cofe, of the Banting Machine Company, gave a forceful talk on "Threshing as a Business." J. E. Hill, of the Avery Company, explained in detail the operation of a separator. J. Donovan, of the Aultman & Taylor Machine Company, talked on road laws and insurance. Mr. Currey represented the J. I. Case Threshing Machine Company—and discussed the benefits to be derived from organization. The Port Huron Engine & Machine Company was represented by M. H. Grosbie, and the Advance

Rumely Thresher Company by Mr. Blanchard.

The entire program on Wednesday was turned over to the representatives of the Illinois Threshermen's Mutual Insurance Company. T. C. Buxton, attorney for the company, talked on insurance and benefits to be derived from and through a mutual company. The committee on organization for insurance made a united effort to put this insurance over the top at this meeting, but lacked about \$78,000 of having the required amount. Since our convention, this committee has completed the organization of the company, and a charter has been applied for. The Illinois Threshermen's Mutual Insurance Company will be able to issue any thresherman policy for insurance upon receipt of application.

At the present time we have \$533-418 worth of applications for insurance, with three hundred and twenty applications.

Returning to our discussion of the program: After Attorney Buxton's talk, Porter J. Milikin, president of the Association of Commerce of Decatur, Illinois, was introduced, and took for his subject "Around the Corner, and Mutual Insurance."

After listening to Mr. Milikin's speech, representatives of both the Indiana and Kentucky organiza-

(Continued on page 55.)

AULTMAN-TAYLOR

Name the Job—The 15-30 Will Handle It

WHEN you buy an Aultman-Taylor 15-30, you buy a hard-working, all-year, all-job tractor—not just a source of emergency power to help you through the rush of spring and fall.

Name any power job on your farm—plowing, discing, threshing, silage cutting, feed grinding—the 15-30 will handle it—and handle it most economically.

In the first place—this tractor has the power. On those toughest jobs, where you **must** call for that burst of power which only that tractor with a wonderful reserve can give—you'll get it—with the 15-30. For it's there—always ready—waiting for you to put it to work. The real capacity of this famous, all-purpose tractor is **above its rating**.

Do you know that 50% of your power jobs are **belt jobs**? There's where the 15-30 again shows its superiority—at the belt. The pulley is of the right size and it's in the right place to deliver a world of steady power. It will easily operate a 27-inch cylinder thresher. And that's a real test of belt power for any farm size tractor.

We suggest that you see your nearest dealer or write us direct for catalog and complete information.

THE AULTMAN & TAYLOR MACHINERY CO.
MANSFIELD **OHIO**
 CANADIAN BRANCHES: PORTAGE LA PRAIRIE CALGARY REGINA



Kerosene Tractor


"Fifty-five years' experience building farm power machinery—fifty-five years' unfailing service to the farmer."



The 15-30 handles four 14-inch plows under all reasonable conditions. A big, powerful, 4-cylinder motor burns kerosene with highest efficiency. Frame is of 7-inch steel channels. High, wide drivers give easy traction and prevent soil packing.

YES! 100% RIGHT

Wood Bros. Thresher Co.,
Des Moines, Iowa.
After 43 years in the
threshing business, I purchased my
first real separator, the Wood Bros.
Humming Bird. It is the highest thresh-
ing separator ever owned. I have
threshed 43,000 bushels of grain with it
this season and I have never seen its
equal. In construction it is simple, hav-
ing but three belts, which is the least
possible on any machine made. The ad-
vantage of being the cleanest of any
machine is by far the best feature.
Bros. Feeder is by far the best feeder
ever attached to a separator.
Yours respectfully,
J. O. ROBINSON & SONS,
R. No. 5, Grinnell, Iowa.



THE HUMMING BIRD
WOOD BROS. THRESHER CO.

Read What Users Say

The man who buys a separator is a practical farmer or thresher. He is not a salesman. And when he tells you points of superior advantage in the Humming Bird Separator, it's because in practical operation of it he has been forced to see them. The practical user does not look for points of advantage like a salesman does. He is interested in using the machine, not selling it.

That's why it pays to give special significance to what he has to say. It inevitably means more than the words signify.

The letters reproduced herewith are only two of a large number that have come to us. Study them carefully.

Five Points of Superiority

1. Simplicity. Fewer belts—fewer parts—perfect co-ordination and balance. Less break-
2. Lightness.
3. Endurance—stronger and more permanent materials. All steel construction.
4. Thoroughness—saving all the grain.
5. Low operating cost.

One point of advantage is enough to justify your selection of the Humming Bird, but—

Five points of advantage make it a business mistake to overlook it.

Write today for full description of our famous Humming Bird Separators. Also complete line of steam engines and attachments.

AT-J

WOOD BROS. THRESHER CO., Home Office and Factories, **DES MOINES, IOWA**
Branches at **Minneapolis, Minn.** **Lincoln, Nebr.** **Decatur, Ill.**

Mention The American Thresherman and Farm Power

LOST—One Hundred Fifty Dollars!

By an INDIANA THRESHERMAN

Because he did not have a
QUICK REPAIR WASHER

Read His Statement

"It was during threshing. I had hired all the help available. Threshing was well under way when my machine choked. It proved that the fan had swerved into the housing. I lost 1 1/2 days' threshing. If I had had one of those WASHERS I would have been at least \$150 ahead."

A time saver. Easily applied. Comes in all standard sizes.

Prices and sample mailed upon receipt of 20c to cover postage and mailing.



DEALERS WANTED

QUICK REPAIR WASHER CO. 509 Occidental Bldg.
Indianapolis, Ind.

Mention The American Thresherman and Farm Power

The "OLD RELIABLE" NELSON HOOD for Pneumatic Stackers

First Stacker Hood placed on the market that cleaned the straw of dust and rust and deposited the straw on the stack like a slat carrier.



It has been on the market 5 years longer than any other make and will be there at the finish.

Other later makes of hoods have already dropped out, and the last of them are trying to exist by being furnished free with other goods. Their principles were not right, and the people have found it out.

We are making the "Old Reliable" Hood in the regular size, also in a special small size for the small size separators which have a small blower pipe.

You can get these hoods from your thresher company or order them direct from us. Please write today for catalog and prices.

Nelson Hood Company, Redfield, Iowa

Women's Department

My Garden

I sit alone in my garden close,
While the gay world passes along,
With never a word or a backward glance,
Or a beckon to join the throng.

The swift "tip tap" of fashion's heels
Clicks on the pavement outside.
Echoes of laughter and jest float back,
And the jingle and swish of pride.

Bell-clang and rumble—the motor's raw
shriek,
The whistle of far-passing train.
All seeming to say, "On, on, let's away.
A brimful of pleasure to drain!"
And I in my garden sit quiet and glad,
With never a wish to go.
For these are my joys through the season's
course
These are the pleasures I know.

Sunlight and cloud and the color-flamed
west,
Twilight and stars and the moon,
Blossom and shrub and the old-trees green
arch,
That shelters my garden at noon.

The cardinal's flash and the mocking-bird's
whirl,
The chatter of blue-jays above.
The lilt of a song bird, the grey doves' soft
croon
These are the pleasures I love.

The slow drift of rain as it filters through
leaves
A dew-sparkled web on the bush,
Butterflies swaying, adrift on the wind,
A grass-blade's courageous up-push.

The creep of a vine as it reaches aloft,
The scent of the earth after rain.
The flush of the peach-tree, the pear's snowy
bloom—
These are the pleasures I drain.

Then into the garden at evening will come,
Another to share it with me.
To rest in its quiet, partake of its charm,
And all its dear beauty to see.

Thus, fragrance and beauty, music and love,
Are all in my garden space.
So, I fare not forth in the rushing crowd,
I need not join in the race.

—Theresa Moore Hunter.

Dangerous Play

BY SARAH J. WILSON

Several days ago I was helping some children build a bonfire in a backyard. As we poked the fire the pieces of charred paper flew up in the air, rising higher and higher. The children watched them with a great deal of interest, calling them "birds" "airplanes," and so on. Finally one boy asked: "What makes them go up?" "Because hot air always goes up," I answered, "and it carries the paper with it." These simple facts satisfied him for the time being. Further experience with the same material will bring forth more "whys," and more important facts will be learned, and remembered, because they come out of actual experiences.

There are a number of activities that are especially attractive to every boy and girl, but which are also a special source of anxiety to every mother. They are those classed as "dangerous"; tree-climbing, swimming, making bonfires and playing with hammer and nails, knives, saws and firearms. I believe this list includes practically all the occupations that are most dear to the hearts of children, particularly boys. And yet, if they have a chance to indulge in them at all it is usually against the wish, or perhaps the direct orders of their parents.

Now stop a moment and consider the unquestionable values that lie in all these plays. Physical strength and self-reliance come through swimming and tree-climbing; industrial skill and ability to think and carry

out one's ideas are developed by the use of hammers, saws and like tools; and physical and chemical facts are only a small part of the value to be derived from bonfires and firearms.

Of course, we cannot overlook the fact that such plays are dangerous. How are we going to meet the children's natural demand for them and at the same time eliminate the danger? In absolutely prohibiting all experiments with "dangerous" playthings the children generally take advantage of some opportunity to evade us and follow their own irresistible inclinations. Even if serious accidents from lack of adult supervision do not happen, it will be granted that the moral results of such evasion of "the law" are undesirable.

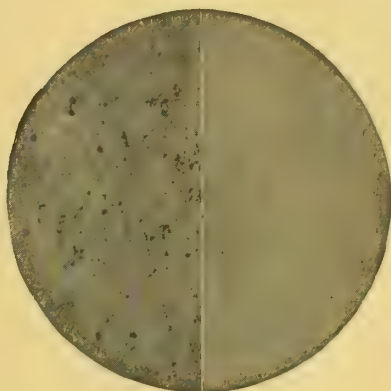
I believe a much better way of dealing with the situation is to coöperate with the children in the gratification of their very natural desire to touch and work with things, and to help them carry out their plans. If the parent, teacher or adult playmate once really gets the children's viewpoint it will make a great difference and will do much to solve this difficult problem. Enter into the children's play, and instead of constraint and fear bring to it new enthusiasm and interest through the greater knowledge you possess of facts and conditions. In this way, you will guard against accidents at the outset by being present to show the children "how" and to explain dangers and remind them once in a while about being careful. Thus you will unconsciously avoid the mistake of making the children feel that they are watched, treatment very galling to any one who is learning self-dependence.

One great value of this attitude is that you gain your child's confidence and can count on his attention and obedience with regard to certain restrictions which you may feel should be imposed, such as not to light a match or build a fire unless he asks you first. Best of all, the children soon learn to be as careful as the most particular adult could wish. Did you ever watch a child climb a tree who has acquired skill and self-reliance through such helpful training? He knows well enough that he must hold tight, avoid dead limbs and be careful where he puts his feet.

Will you not feel more confident after procedure of this kind that the children will be able to meet and conquer other difficulties and experiences and you can trust in your sympathetic interest to make them want to come to you in case of need and in the ideals you constantly hold before them to strengthen and guard them from harm? Your reward will come in the self-reliance, moral strength, and increased knowledge of

KEEPING KEROSENE OUT OF THE CRANK CASE

Used oil as seen through the microscope. Note the grit and punctures in the film.



Fresh oil as seen through the microscope. Note the smooth, unpunctured film.



The leakage of kerosene into the crankcase of a vertical tractor motor can be almost entirely stopped by proper lubrication.

With the ordinary methods of lubrication, a typical four cylinder motor allows over two and one-half pints of kerosene to leak into the crankcase in ten hours.

When this motor is equipped with fresh oil lubrication the leakage amounts to less than one-fourth of a pint.

The direct saving of kerosene that the fresh oil system makes possible in this motor is only part of its fuel saving.

Altogether it amounts to 13½% per brake horsepower—or more than one-eighth.

The oil saving effected by the fresh oil system is even greater.

With the ordinary lubricating system, the leakage of kerosene makes it necessary to drain off all the crank-case oil at the end of each full working day.

With the Madison-Kipp Fresh Oil System, a long series of carefully made tests show savings of oil amounting to 83%.

These and many other tests are available for inspection to any one interested.

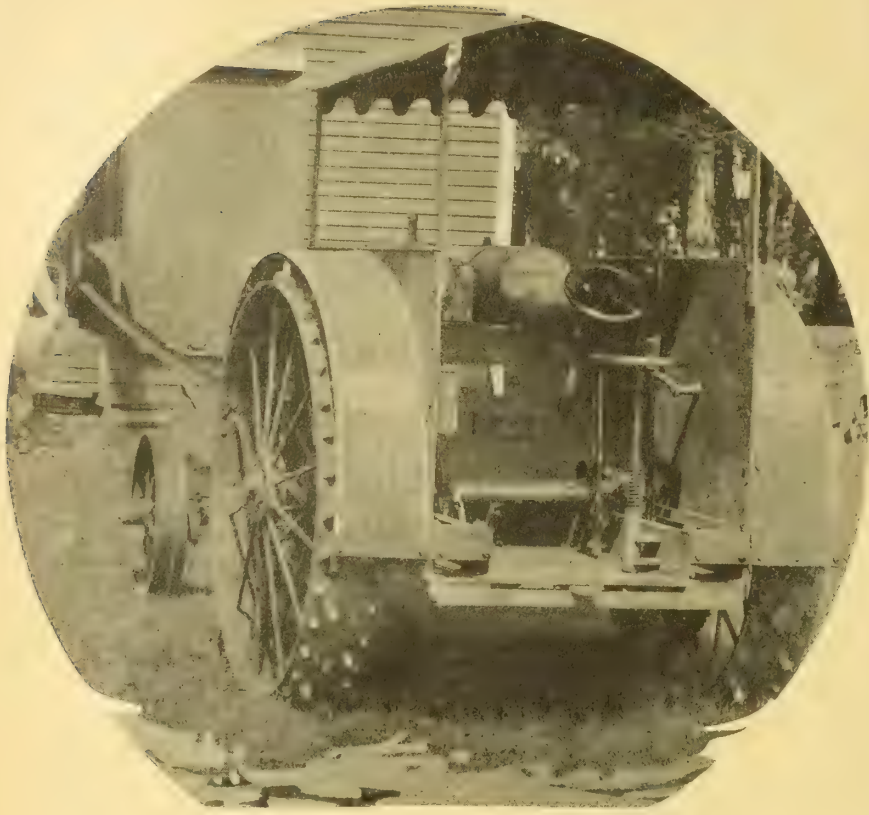
Similar results have for years been demonstrated in the field by thousands of two-cylinder tractors.

The natural consequence is a decided preference for Kipp-Equipt motors among experienced tractor users.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators

**Fresh
Oil
Systems**



Soon Comes the Rush for Canvas Belts

DOING things at the right time is the slogan of the day. In the office, in the factory, or on the farm, it's the goal everybody is pushing toward.

You'll need new belts this year, and you'll need them soon. Then, isn't it far better to order now and be prepared than to wait until the last minute and run chances of delays? Of course it is.

Doing things at the right time is to buy your belting now.

And try HETTRICK by all means. You can't go wrong. They're good canvas belts that will give you your money's worth.

When farmers stick to Hettrick year after year—re-order time and again—then it's a pretty safe shot that they're belts that wear well.

But try them yourself.

Hettrick Manufacturing Co.
Toledo, Ohio

Hettrick

Canvas Belts

Mention The American Thresherman and Farm Power

your children, in their keen interest in the things in the world about them, and in their real confidence in you.

The "Good Business" of Being a Farmer

F. H. SWEET

"Yes, Harold and I were made for each other, I am sure, and we both love the country and the farm-life, but I do wish he could get established in 'some good business' before we marry."

It was my dear little niece, who spoke, and she and I had been talking about their coming marriage and their problem of where to start. Now I felt they were born farmers, so I sat right down and gave her a concrete example of what had been done in the way of "good business" on one farm that I knew about.

Maybe you, too, have been thinking it a poor business, too slow and too little money? Maybe you've been giving more thought to the opportunities you could discover in other things than in what the soil offered. Now right here in sight of my home is an immense apple orchard whose owner sold his fruit two years ago for more than forty thousand dollars; and yet the man who owned the orchard before—less than twelve years before—left it because he could not make a living, and went back to a low-priced, more remote farm in the country. One man could not see beyond the current year's profit, and so neglected his trees and was careless of a market; the other looked ahead and studied his business and the market for it. And this case, in greater or lesser degree could be multiplied by any of us.

But what I have in mind now is corn—just common field corn, that our backs have ached over in planting and cultivating and husking, and yet which brought hundreds of thousands of dollars to a man who made his mind work with his hands—or ahead of his hands, rather.

Dave Rankin was born in Indiana, and soon after was taken to Illinois, when those states were on the Western frontier. In those days the mail was forwarded without postage, and the one receiving a letter had to pay twenty-five cents to get it. Wheat was less than that much a bushel then, and the grower was accustomed to get only one-fourth in cash for his grain, and the rest in barter. So it took four bushels of wheat to get a letter from the postoffice. With money so scarce, a good deal of ingenuity was used in trading. It was barter and trade sure enough. And this was the practical schooling Dave got until he grew to manhood.

He started in business for himself when he was twenty-one years old, in 1846. For some time he had been watching the operations of a cattle feeder named Strawn, and he decided

that if he could combine stock with farming it would pay better.

It was then a common thing for people to raise crops for years on land without any title to it, and later on to buy it if they could. The pioneers in those days settled on the poorest ground, as they must be close to wood and water. They were afraid they would freeze out on the prairie. But when Dave got a little money ahead to buy land he took the prairie with its chance of freezing. Many people thought it better to rent land then, but Dave never took that view. Whenever he had a few dollars ahead he bought land.

When he married, in 1850, he owned eighty acres of land and a few cattle. He had raised a crop of wheat on the land before he got a deed for it—that was the first warranty deed that ever bore his name. A few dollars left were invested in young steers.

From 1852 until about 1861 Dave paid from fifteen to eighteen per cent for borrowed money, but this money was used to buy more land. He always invested his profits in land, and often borrowed to operate the land. He did not make any great profit, however, until about 1865, when his land rose rapidly in value. This confirmed his land idea, and all the money he could get was put into land in northwest Missouri and southeast Iowa, buying good land for from five dollars to ten dollars an acre, which, too, rose rapidly in value.

Dave's farms now vary in size from seven hundred acres upward. One contains eight thousand acres, six hundred of which are put into corn, with the rest left for grass and feed yards. His feed lots or pastures are a surprise to his visitors, for the smallest covers one hundred sixty acres. He has others of two hundred forty to three hundred twenty acres, and one pasture of six hundred forty acres. All his land is fenced hog tight.

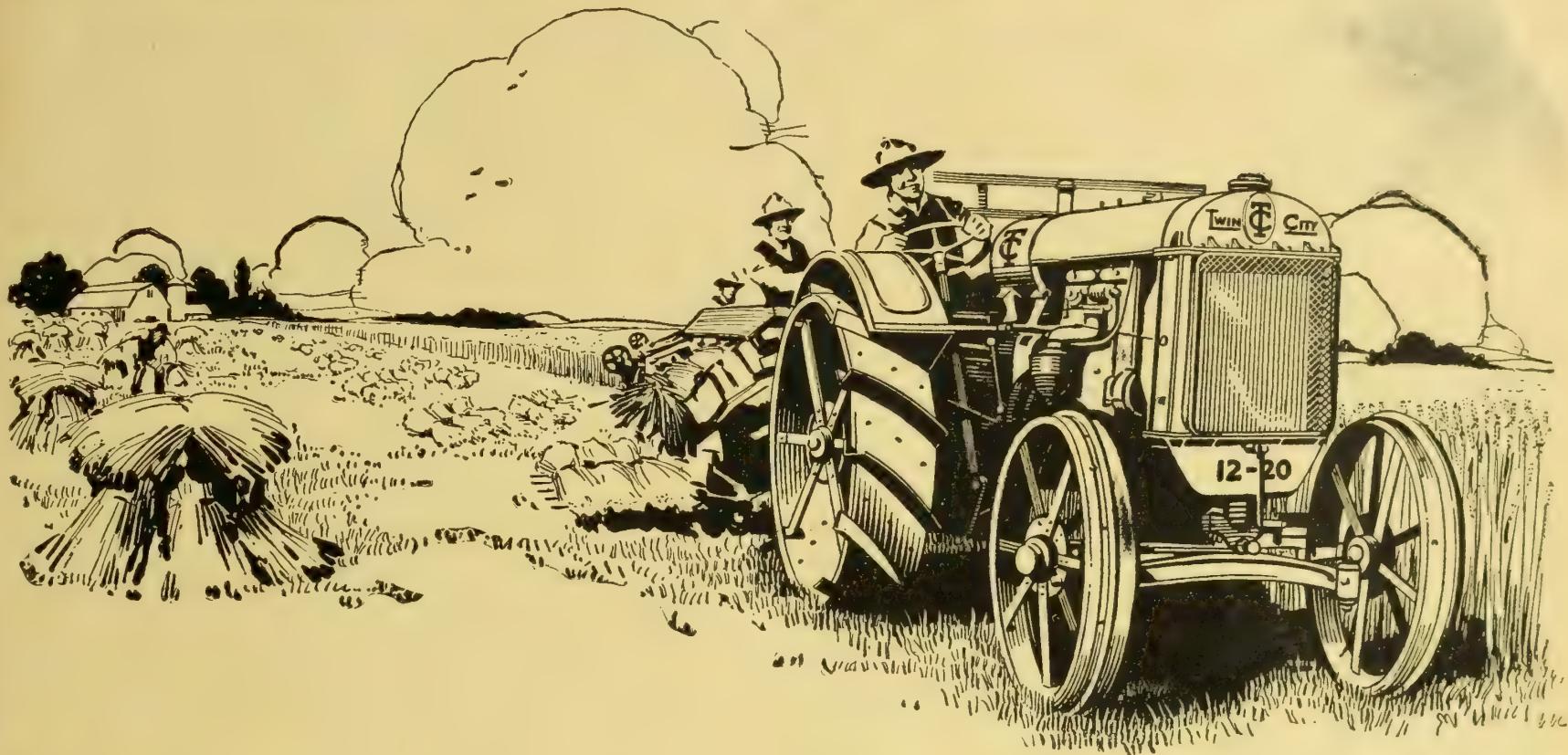
Money which he got by selling fattened cattle in New York in 1865, he invested in some five thousand acres of land at about six dollars an acre. On this he established the town of Rankin. Here he raised immense quantities of broom corn, and sold it as high as three dollars and twenty cents a ton in Chicago. He has declared that he made \$200,000 out of it.

When he first began buying land in Illinois, he did it with a view to growing corn. He felt sure there was a great future in corn, and determined to own only such land as would grow that or clover. About this he never changed his mind. Of late years, however, he has admitted that the corn crop was far more important than he had ever anticipated.

Mr. Rankin plants several vari-

TWIN CITY

12-20 Kerosene Tractor with 16-valve engine



When Every Hour Counts

You know there will be no delays in haying, harvesting, threshing, or any tractor work on the farm, when you have the Twin City 12-20. You can clean up all these jobs at the right time—in quick time—and be ready for your fall plowing.

For there are no uncertainties about the Twin City. The best that tractor science has produced is built into this tractor. Its 16-valve (valve-in-head) engine delivers full power because it exhausts *all* burnt gases, leaving a clean cylinder for each new charge. This means more power from the fuel—more power applied to the work—real fuel economy you can see.

With the Twin City's great surplus power you have the rugged strength and light weight which only the

finest special alloy heat-treated steels can give. It is built to do the work, not to meet a price. This means dependability year in and year out.

Removable cylinder walls for uniform cooling and quick and easy replacements—crankshaft counter-balanced and drilled for force-feed lubrication—all transmission gears of special alloy steel drop-forged and heat-treated, completely enclosed and running continuously in bath of oil—Hyatt roller bearings throughout.

There is a Twin City of horse power to meet the needs of every size farm: 12-20, 16-30, 25-45, 60-90. All-Steel Twin City Threshers have several exclusive grain saving features: 22-42, 28-48, 36-60. Write for details.

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MINNEAPOLIS, MINN.

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22-42



12-20

Motorize your farm with a Twin City 12-20 Tractor and 22 42 Thresher Team of Steel



Saturn Rubber Endless Thresher Belts

They do not absorb moisture, have minimum stretch and long life.

If your dealer cannot supply you, address

The Gutta Percha & Rubber Mfg. Co.
303 W. Randolph Street, CHICAGO

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GET BIG BUSH OFFER

We do not deal through distributors but County Agents only. GET OUR BIG MONEY CATALOG TODAY. Don't wait! Learn how you, in your spare time, can make Big Money. Introducing Bush Cars in your County. The cars with Money-Back guarantee. Bush light four and De Luxe six. Don't wait. Write today!

BUSH MOTOR CO., Chicago, Illinois, Dept. 549 Bush Temple

Kill All Flies!

THEY SPREAD DISEASE. Placed anywhere, DAISY FLY KILLER attracts and kills all flies. Neat, clean, ornamental, convenient and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed. DAISY FLY KILLER at your dealer or 5 by EXPRESS, prepaid, \$1.25. HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.



eties of corn, and is always experimenting, and always on the lookout for choice seed. He does not try to breed seed corn for his own use, but depends on the breeders of the varieties which are best adapted to his locality. Each year he uses from four to six thousand bushels of corn for just seed. To raise his great crops, Mr. Rankin follows this method: Keeps his ground very rich. Feeds cattle and hogs upon it, and plows deep, turning the ground completely over. In other words, thorough plowing and cultivating, and going over the ground at least once a week until corn is too large to cultivate. About four or five crops, and then he sows the corn land to timothy and clover, and pastures and feeds on the land three to five years, to get good, rich soil again. After that, plows up the sod and raises corn for another term of years.

In 1906 he planted over nineteen thousand acres in corn. The yield averages, one year with another, about fifty bushels to the acre. He had one field of fifty acres that averaged one hundred eighteen bushels to the acre. Usually his annual crop of corn runs over a million bushels.

Some of his corn Rankin raises on shares, in which case he turns over a body of land to a good, reliable farmer. Rankin furnishes the money for stock, etc., to run the farm, the other man pays interest on half of the money supplied. In 1909 two of his foremen in this way handled four thousand acres apiece, and cleared about \$12,000 each. He also furnishes land to raise corn for him at a fixed price per bushel for all grown.

Rankin contends that most of his success is due to good judgment in selecting foremen and men, and in studying soils and market conditions.

When he was a boy he plowed the ground with a wooden mould board, which had to be cleaned with a paddle about every twenty rods. They cut grain with a hand sickle, and threshed the grain by trampling it out with horses, or by flaying it out with a flail, and cleaning up with a sheet or fanning mill. Up to that time no progress had been made since the days of Moses, cutting wheat just as Boaz did when Ruth gleaned in the fields, after the reapers. Rankin declares that farmers nowadays can't appreciate what the steel plows (which were first made about 1844,) have done for America, because they never had to put up with the old home-made tools. After the steel plow came the cradle in place of the reap-hook. Since then Rankin has spent immense sums for improved agricultural tools, and, in the main, every purchase has been of value to him. Whenever he can buy an instrument that will reduce the labor or perform the work better

than the old-style machine, it pays him to throw the old ones away and get new ones. It isn't the cost of the machine that figures much. Rankin illustrates it like this:

A good steel plow will turn two or three acres of sod per day. Say you use it only thirty days in the year, and it lasts fifteen years; then it has turned one thousand three hundred and fifty acres, and its cost is about thirteen dollars and fifty cents, which is about one cent per acre. A stalk cutter will cut ten or twelve acres of stalks a day, and do a good job of it, and while it costs about thirty dollars, still you wouldn't try the job nowadays with a hoe. A self-binder will handle from twelve to fifteen acres of grain a day, and require an outlay of about ten or fifteen cents per acre; still, how much would it require in additional labor to handle the crop without it? With a single shovel a man could do a fair piece of scratching, and cover four acres in a day, while with the common single-row cultivator he can do a much better job and do eight acres, and with a modern two-row cultivator he can as easily do fourteen to sixteen acres. The two-row cultivator will do better work and cut the cost, too, by lessening the amount of labor for both men and horses.

What is true of big manufacturers and railroads, is equally true of the farmer. To make profit he must reduce the cost of production. Rankin saw this long ago, and when he saved a hand's wages by the use of a straddle-bow cultivator which he invented and had made for himself, he felt pretty good—that was making money. He now grows from eighteen thousand to twenty thousand acres of corn a year, and figures that his great number of double-row cultivators save him \$20,000 each year. He uses large mowers, large binders, gang plows—and, in fact, everything of as great capacity as possible, so as to save labor and make possible larger areas of crops.

After Rankin has grown a great crop of corn, and got his hay in barns and stacks, and his corn in monster cribs, then he is ready with his stock, cattle and hogs to convert his grain into ideal market shape. With plenty of stock for each farm he feels contented—for then the mills are grinding.

To carry on this large business, Rankin has worked out a system adapted to his requirements. The farms are known by numbers. Each foreman, with whom he is in direct communication by telephone at all times is equipped with a full set of blank reports, requisitions, etc., which facilitates the handling of the business so that a few minutes of clerical work by each foreman each day keeps the records in complete and intelligible shape.

Rankin ever speculates, is proud

"I Cleared \$3700 Last Year With Your Ditcher"

Joseph Rivard

JOSEPH RIVARD is but one of hundreds of men who have taken up this big-money business of ditching. And many others are making even more with a **Buckeye Traction Ditcher**.

"We made \$4500 last year with our Buckeye," write Herr Bros., Piper City, Ill. "We have just ordered two more machines, making five in all, which we own."

\$6500 for J. E. Griffith

"My Buckeye made me \$6500 during the 1918 season," writes J. E. Griffith, London, Ontario. "I averaged 175 rods a day while working."

Made \$71 In One Day

R. W. Sherrard, Rochester, Ind. writes, "In one day's work with my Buckeye, I cut 117 rods of ditch 42 inches deep, for which I received \$71. I have had my machine for three years, but run it only half the time as I have other work to attend to. It is still in A-1 condition."

We Will Show YOU How To Make Big Money

These are average letters from a few Buckeye owners. We have started hundreds of others—farmers, farmers' sons, contractors—in this high-profit business of ditching. Right in your own locality, spare time or full time, you too, can easily make thousands of dollars a year in this big-money work. **No experience necessary.** Our service engineers start you right and stand behind you.

For the ability to dig through the toughest jobs, through hardpan or frost; for built-in ruggedness and durability; for the utmost service through season-after-season continuous work, **the Buckeye Ditcher is without an equal!**

Drop us a line today. Let us talk over with you the ditching possibilities in your section. We will give you our unbiased advice about starting in this large-paying business in your locality. Write today.

The Buckeye Traction Ditcher Co.
195 Crystal Ave., Findlay, Ohio

I cleared \$3700 above all expenses last year with a Buckeye. I dug 23,431 rods of trench during the 1918 season—as high as 325 rods in one day.

Will be glad to write anyone who is thinking of going into the ditching business.
—JOSEPH RIVARD, Tilbury, Ont.



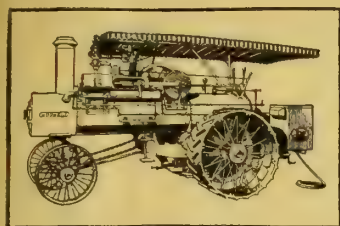
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"A Perfect Trench at One Cut"

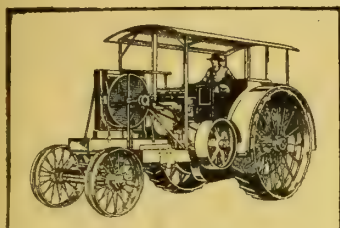
BUCKEYE

Traction Ditcher

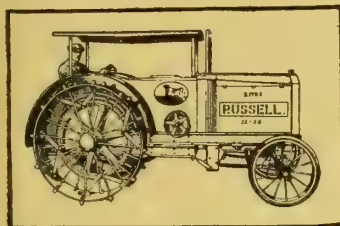
Threshermen—Can You Beat This?



Steam Traction Engine



30-60 H. P. Giant



Made in 12-24, 15-30 and 20-35

**"99 $\frac{7}{8}$ % of
the Grain"**

**"4080 Bushels
in 10 hours"**

We quote the following editorial from the
Manhattan Messenger, Manhattan, Illinois:

"A test of a New Russell threshing machine, held Monday on the farm rented by Charles Sweetwood, showed results of which any manufacturer may well be proud.

"The machine, on a test, threshed 68 bushels of oats in 10 minutes, dropping the straw on a canvas. The straw was then removed carefully and the residue of chaff run through a fanning mill and when all cleaned up to the last kernel only 2 $\frac{1}{4}$ pounds of oats was found out of 68 bushels. When a threshing machine gets 98 bushels out of a hundred it is considered to be doing good work. The loss of 2% of the grain is generally considered unavoidable, but the grain run through the Russell showed a loss of less than ONE-EIGHTH OF 1%.

"This is also a record for fast threshing, being at the rate of 4,080 bushels per day of 10 hours. This Russell machine is owned by Wm. F. Kreimeier and was pulled by a 16-horse power Russell engine owned by Quigley Brothers."

YOU can have the same service by using the same machines.

THRESHERMEN: Your success, your reputation, your profits, depend largely upon how good a thresher you have. Get the one thresher that is backed up by 78 years of constant improvement—the old reliable Russell. FARMERS: It's the grain you save, not what you raise, that makes you dollars. Have your threshing done by an old reliable Russell.

Russell Threshers

Built in six sizes from the 20x34 to the big 36x60, all alike in pattern, design, exclusive features and everything but size.

Have our big, easy-running, 15-bar cylinder, high finger grate distributing beater, etc.

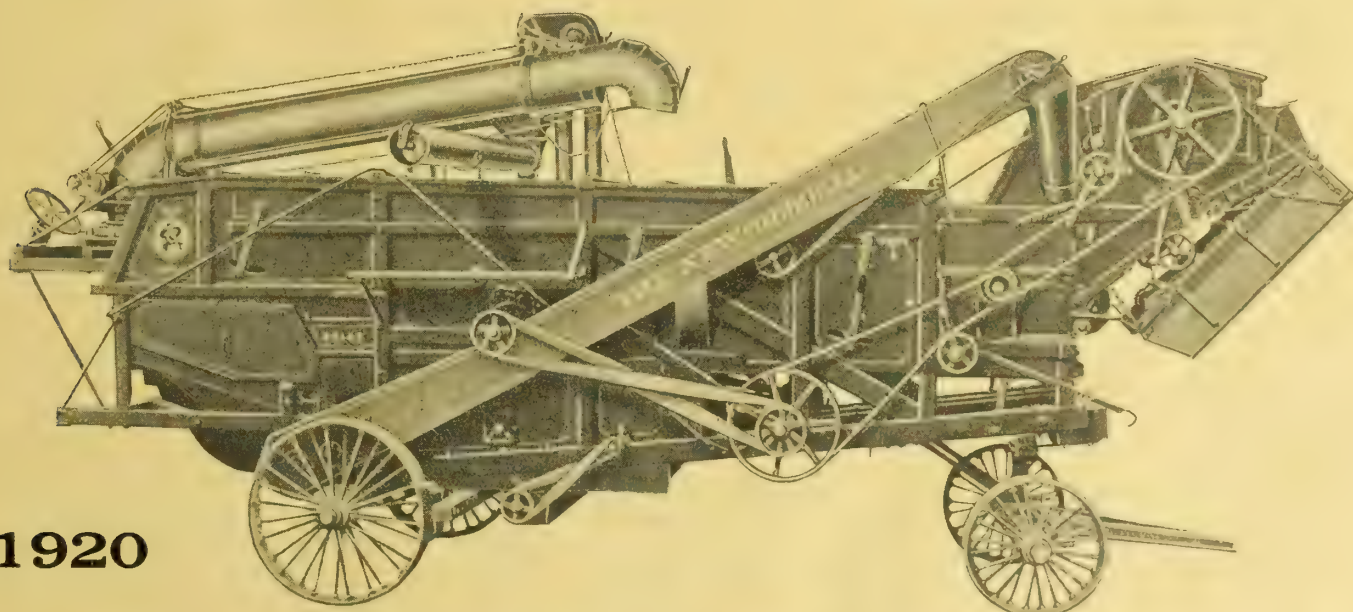
Unequalled for putting the grain in the sack—not the stack; adaptable for threshing grains, rice, seeds and beans.

Russell Tractors

Our Steam Tractor is made in 5 sizes and has never had a real rival for running threshers. Our Gas and Oil Tractors are made in four sizes, a size for every farm. They are just as superior in their class for plowing, discing, hauling and general farm power work. Built up to the Russell standard, not down to a price

Send for the Big Russell Catalog

The Russell & Co., Massillon, O.



1842-1920

RUSSELL

THE OLD RELIABLE LINE

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San Jose, Cal.	The A. H. Averill Mach. Co.
Council Bluffs, Ia.	The Clark Implement Co.
St. Joseph, Mo.	Geo. O. Richardson
Wichita, Kans.	Mach'y Co.
St. Paul, Minn.	F. P. Harbaugh Co.
Chattanooga, Tenn.	The Massillon Eng. & Thresh. Co.
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Toledo, Ohio.	The Arbuckle-Ryan Co.
Goshen, Ind.	The Arbuckle-Ryan Co.
Milwaukee	Lindsay Bros.

Atlas

You should know
the true economy of
Atlas Canvas Belts.

You should know how much
better work you get out of
them, how much more wear, how
much more satisfaction. Their
trouble-free performance spells
economy.

You should know and try Atlas.

For until you do, you're passing up the
best "buy" in farm belts.

Order direct or through your dealer.

Acme Belting Company
Manufacturers
Niles - - - Michigan

Belting

Mention The American Thresherman and Farm Power

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (Total disability)	\$10,000.00
Loss of eye	\$ 1,990.00
Loss of hand	\$ 2,500.00
Loss of index finger	\$ 650.00
Broken leg	\$ 200.00

Even though the law did not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above when a policy can be secured with us for a minimum premium of \$30.00.

Let us assume all your liability. Write us today for application blanks and full particulars.

**Threshermen's National Insurance
Company, Ltd., Mtl.**

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

of being a common farmer, finds it profitable to feed all his corn, and employs about two hundred and fifty men. By feeding the corn on the place he declares he receives a much better price for it in the way of beef and pork, and then he gains an immense amount of fertilizer to keep his lands enriched.

Tried and Found True

(The Editor of the Woman's Department has tried all the recipes printed below, in her own kitchen, and found them "true.")

CHOCOLATE COOKIES.

Two cups of molasses, four cups of dry cake crumbs, one-half cup of butter, one-half cup of sugar, one tablespoon of soda, two eggs, one-half cup grated chocolate. Flour to mix soft.

STRAWBERRY SHORTCAKE.

Every June some member of the family announces with the air of having made an extremely interesting discovery:

"There simply isn't anything else, that is made to eat, half so good as strawberry shortcake!"

Usually this announcement comes after we have just finished one. Then we all laugh and try to remember who made the same remark a year ago.

Now there are undoubtedly differences in the "tastes" of different families, but the way we like strawberry shortcake is as follows:

To each cup of flour allow two tablespoons of shortening. (nothing else is quite as nice as butter, but we use Crisco, for butter is too expensive. Two teaspoons of baking powder, one-fourth teaspoon of salt, and milk enough to make a dough just too

soft to "roll" and too stiff to "run." Sift dry ingredients together, work in shortening with tips of fingers, add milk and turn onto a buttered pan, without rolling. Flatten with a spoon and bake in a quick oven. No sugar? Yes, "no sugar" in the dough, but do not imagine the sugar bin is to escape!

Have the berries looked over, hulled and washed. Cut or mash them as you prefer and stir in a generous allowance of sugar. When the cake is done, split (do not cut) and butter very generously, heap the berries on, replace top, well buttered, and cover all with berries. Whipped cream may be added or cream passed for individual service.

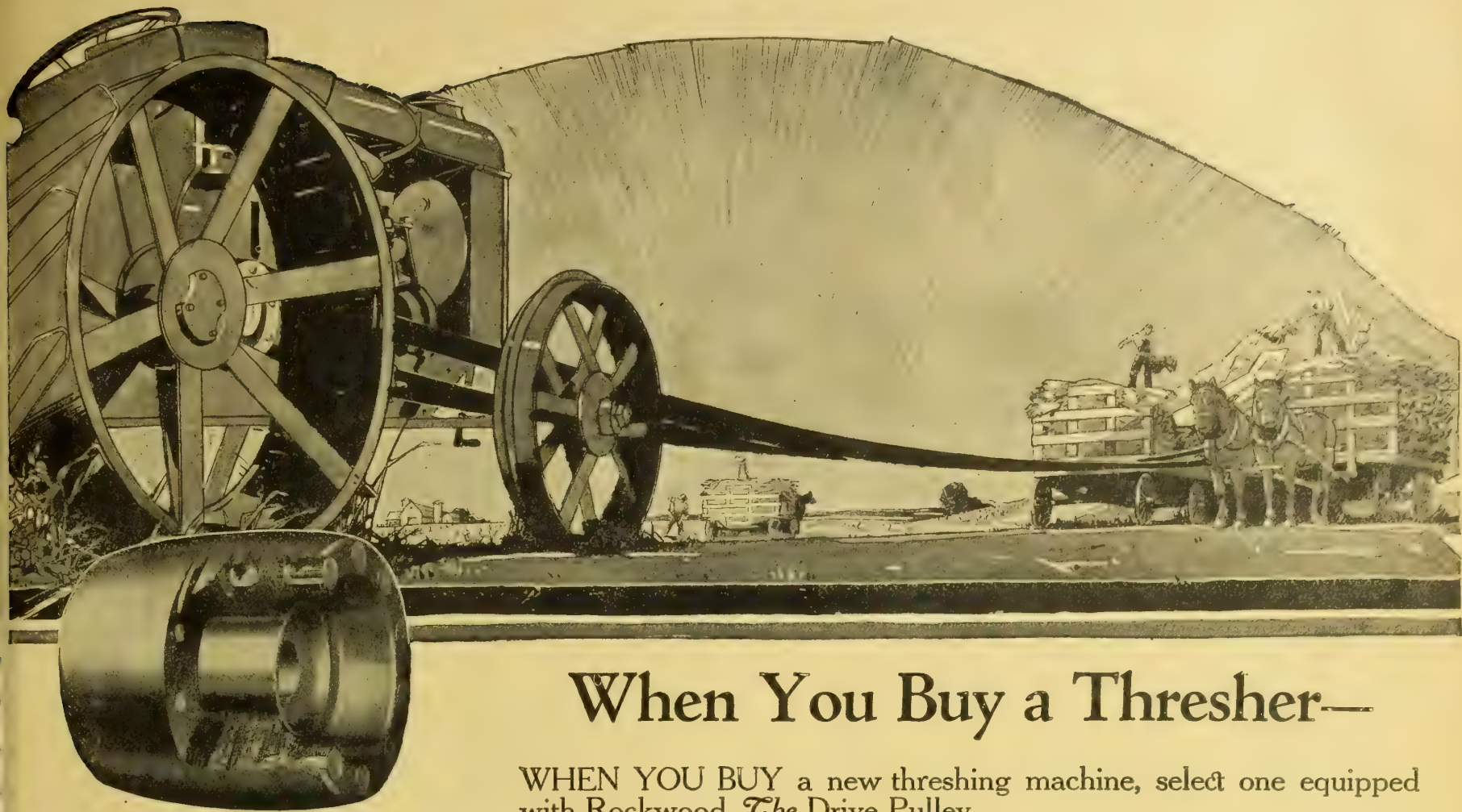
There are several "little things" that go to making a "perfect" shortcake. One of these is that it should be served fresh from the oven. That is not so difficult as it may sound. Pop it in when the family sits down to the meal and it will be ready to serve at about the right time. With the berries prepared and even the required dishes placed in the kitchen, it is a short matter to "fix" the cake and bring it to the table. In our family, one of the girls does this service and there is always an exclamation of delight from more than one place at the table as the uncut cake is put before mother.

Another desirable thing is to have plenty of berries, plenty of butter and plenty of sugar. Strawberry shortcake can be made on a "skimp" allowance of these ingredients, but the "perfect" strawberry shortcake can not.

For a family of six, use two cups of flour and the other ingredients in proportion.

Prominent Fairs, 1920

	Secretary
ALABAMA, Alabama State Fair, Birmingham, Oct. 4-9	J. L. Dent
CALIFORNIA, California State Fair, Sacramento, Sept. 4-12	Chas. W. Paine
COLORADO, Colorado State Fair, Pueblo, Sept. 19-25	J. L. Beaman
COLORADO, National Western Stock Show, Denver, Jan., 1921	Fred P. Johnson
CONNECTICUT, Connecticut State Fair, Hartford, Sept. 6-10	Will P. Landon
GEORGIA, Georgia State Fair, Macon, Oct. 28-Nov. 6	Harry C. Robert
GEORGIA, Southeastern Fair Association, Atlanta, Oct. 16-26	R. M. Striplin
IDAHO, State Fair of Idaho, Boise, Sept. 21-25	O. P. Hendershot
ILLINOIS, Illinois-Indiana Fair, Danville, Aug. 23-Sept. 4	Geo. M. McCray
ILLINOIS, Illinois State Fair, Springfield, Aug. 20-28	B. M. Davidson
ILLINOIS, Kankakee Inter-State Fair, Kankakee, Aug. 24-28	Len Small
ILLINOIS, National Dairy Show, Chicago, Oct. 7-16	W. E. Skinner
INDIANA, Indiana State Fair, Indianapolis, Sept. 6-11	Charles F. Kennedy
IOWA, Iowa State Fair, Des Moines, Aug. 25-Sept. 3	A. R. Corey
KANSAS, Kansas Free Fair, Topeka, Sept. 13-18	Phil Eastman
KANSAS, Kansas State Fair, Hutchinson, Sept. 18-24	A. L. Sponsler
KENTUCKY, Kentucky State Fair, Louisville, Sept. 7-11	F. T. Kremer
LOUISIANA, Louisiana State Fair, Shreveport, Oct. 28-Nov. 7	W. R. Hirsch
MASSACHUSETTS, Eastern States Exposition, Springfield, Sept. 19-25	J. C. Simpson
MICHIGAN, Michigan State Fair, Detroit, Sept. 1-6	C. W. Dickinson
MICHIGAN, West Michigan Fair, Grand Rapids, Sept. 20-25	L. A. Lilly
MINNESOTA, Minnesota State Fair, Hamline, Sept. 4-11	T. H. Canfield
MISSISSIPPI, Mississippi State Fair, Jackson, Oct. 19-24	Mabel L. Stire
MISSOURI, Missouri State Fair, Sedalia, Aug. 14-21	E. G. Bylander
MONTANA, Midland Empire Fair, Billings, Sept. 21-24	R. H. Cosgrove
MONTANA, Montana State Fair, Helena, Sept. 13-18	Horace P. Ensign
NEBRASKA, Nebraska State Fair, Lincoln, Sept. 5-10	E. R. Danielson
NEW JERSEY, Inter-State Fair, Trenton, Sept. 28-Oct. 2	M. R. Margerum
NEW YORK, New York State Fair, Syracuse, Sept. 13-18	J. D. Ackerman
NORTH DAKOTA, Inter-State Fair, Fargo, July 12-17	F. W. McRoberts
NORTH DAKOTA, North Dakota State Fair, Grand Forks, July 20-24	Don V. Moore
OHIO, Ohio State Fair, Columbus, Aug. 30-Sept. 4	E. V. Walborn
OKLAHOMA, Oklahoma Free State Fair, Muskogee, Oct. 4-9	Ethel M. Simonds
OKLAHOMA, Oklahoma State Fair, Oklahoma City, Sept. 25-Oct. 2	I. S. Mahan
OREGON, Oregon State Fair, Salem, Sept. 21-26	A. H. Lea
OREGON, Pacific International Live Stock Exposition, North Portland, Nov. 17-22	O. M. Plummer
PENNSYLVANIA, The Great Allentown Fair, Allentown, Sept. 20-25	Harry B. Schill
PENNSYLVANIA, Erie Exposition Association, Erie, Aug. 19-24	C. R. Cummins
SOUTH DAKOTA, South Dakota State Fair, Huron, Sept. 13-18	C. M. McIlvaine
TENNESSEE, Chattanooga Inter-State Fair, Chattanooga, Oct. 2-9	Jos. R. Curtis
TENNESSEE, Memphis Tri-State Fair, Memphis, Sept. 25-Oct. 2	Frank D. Fuller
TENNESSEE, Tennessee State Fair, Nashville, Sept. 20-25	J. W. Russwurm
TEXAS, Texas State Fair, Dallas, Oct. 19-24	W. H. Stratton
UTAH, Utah State Fair, Salt Lake City, Oct. 4-9	D. W. Parratt
VERMONT, Vermont State Fair, White River Junction, Sept. 28-Oct. 1	F. L. Davis
VIRGINIA, Virginia State Fair, Richmond, Oct. 4-14	W. G. Saunders
WASHINGTON, Spokane Inter-State Fair, Spokane, Sept. 6-11	J. H. T. Smith
WASHINGTON, Washington State Fair, North Yakima, Sept. 20-25	G. C. Finley
WASHINGTON, Western Royal Live Stock Show, Spokane, Nov. 4-8	W. L. Tennant
WISCONSIN, Wisconsin State Fair, Milwaukee, Aug. 30-Sept. 4	Oliver E. Remy



ROCKWOOD The DRIVE PULLEY

[with section removed to show construction]

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inchesthick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

When You Buy a Thresher—

WHEN YOU BUY a new threshing machine, select one equipped with Rockwood, *The Drive Pulley*.

Rockwood, *The Drive Pulley*, will transmit the maximum power of the belt to the cylinder, insure uniform threshing speeds and eliminate excessive belt slip and belt wear. Gives steady, dependable service in any weather on any job—no delays, no repairs. Its wonderful gripping surface lasts for years.

The efficiency and dependability of Rockwood, *The Drive Pulley*—its brute strength for heavy duty, when the straw is wet and tough—make it the ideal drive pulley for grain separators. It is the pulley *you* should have on the new machine you buy.

Rockwood, *The Drive Pulley*, will serve you equally well on other heavy duty belt driven farm machines. Now standard, as equipment on Fordson Tractors, Ross and Ann Arbor Silo Fillers, Ann Arbor Hay Balers, Layne & Bowler and National Pumps and numerous other leading farm machines.

Let us send you our interesting booklet, "Belt Power on the Farm." Write today,

THE ROCKWOOD MFG. CO. - 1926 English Avenue - INDIANAPOLIS, IND.

AVERY "Yellow Fellow"

"MINNEAPOLIS"

BANTING "Greyhound"

These illustrations show a few of the many well-made, dependable threshing machines now using Rockwood, *The Drive Pulley*, as standard equipment

"PORT HURON"

"NEW RACINE"

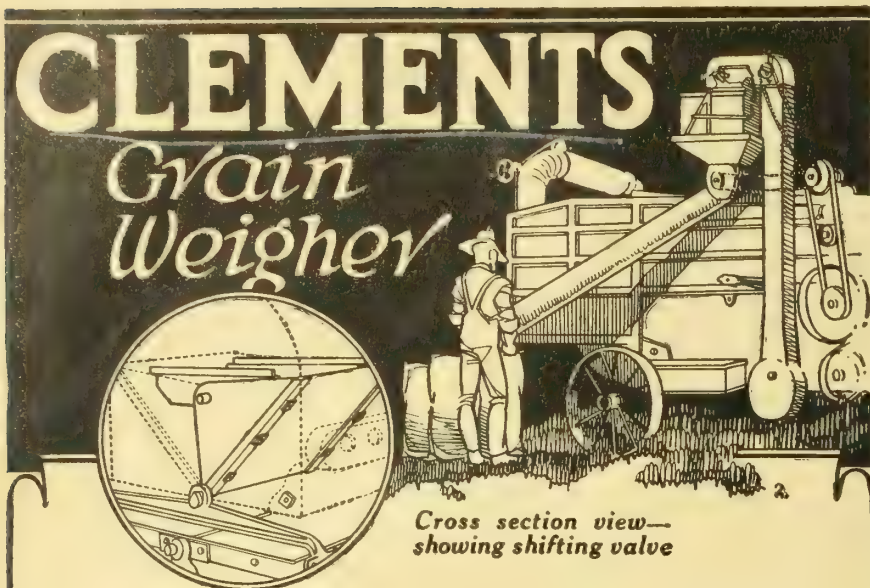
"HUBER JUNIOR"

"NEW FRICK"

CAPE "New Model"

All the Power—All the Time

ROCKWOOD, PULLEY SERVICE



Automatic self-locking

Absolutely all leaking of grain eliminated by the "Clements." After each dump weigher automatically locks itself, until full weight is received in weighing hopper. Double weighing hopper takes grain in a steady stream. Flow of grain from elevator never stops. You are never bothered with a clogged head or elevator, no matter how damp the grain. Farmers all over the country prefer their threshing done with a "Clements" Double Hopper Self-Locking Grain Weigher.

Gives the Thresherman and the Farmer a square deal

With a "Clements" you can not over-run or run short. Not a single grain can run through. Simply set your scale for dumping at the required amount. Your tally will be exactly

the same as that at the elevator. The "Clements" assures satisfaction to you and to the farmer. It weighs automatically, is independent of gears and cannot make a mistake.

Write for Catalog

We will send you, free, our catalog which will fully illustrate and describe this gearless, double hopper, self-locking Grain Weigher. The "Clements" is a time, labor and money saver to all threshermen

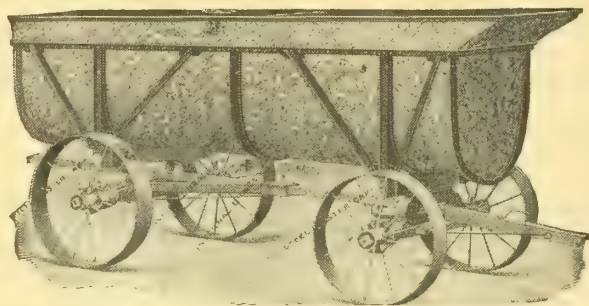
Dept. 2.

IDEAL Grain Weigher Company
PEORIA, ILLINOIS

CLEMENTS Grain Weigher

Mention The American Thresherman and Farm Power

Do You Want High Quality



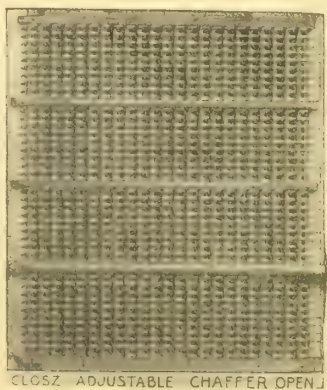
At a very moderate price? Then get a

**BUTLER
TANK**

The Butler Company
Butler, Indiana

Mention The American Thresherman and Farm Power

The Chas. Closz Patent Adjustable Sieves and Adjustable Chaffers



have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa

Asked and Answered

Question of J. N. What causes dynamite to burn up instead of going off?

Answer.—Faulty crimping of the cap on the fuse is usually the cause. To prevent this use a cap crimper.

Question of G. G. P. I have a steam traction engine which is in good condition excepting that the boiler is badly scaled. Can I mix muriatic acid and soft water, one to ten parts, the same as they do to clean injectors and put this in the boiler and leave until the scale is dissolved, or, would this ruin the boiler? I figure that the expense for acid would not be more than \$20 per boiler, and that would be better than \$125 for new flues. I should like to try this out, but should prefer to have some advice first, because I do not wish to injure my boiler.

Answer.—I doubt the advisability of using muriatic acid and water as you suggest in your boiler to rid it of scale. I took this matter up with a chemist and he tells me that the muriatic acid will in no way injure good, solid iron or steel. It is sometimes used, however, to remove rust from iron, and therefore, if there are any places in the boiler where rust has eaten in, it may be that the removing of this rust would so weaken the spot as to cause a leak. This might especially be true at a seam or at a rivet. Surely there are other methods that would be better.

Salsoda very often is used in automobile radiators with success and it seems to us that it would be even more difficult to remove the scale from a radiator than from the boiler flues. The salsoda will be comparatively inexpensive. The strength recommended usually is one pound of salsoda to five gallons of water. After filling the boiler, the water should be brought to the boiling point and boiled for perhaps an hour. Then by blowing out the boiler you should be able to get rid of most of the scale. The boiler then should be emptied and rinsed out before clean water is put in.

We have been told by threshermen that they clean their boilers thoroughly by putting a pail of sweet milk in the boiler and keeping a little steam up for forty-eight hours. We have never tried this, but we have had threshermen tell us that they clean their boilers in this way as clean as they were when they first came from the factory.

Kerosene sometimes is used in softening the scale. If the scale is bad the kerosene should be put on the water when the boiler is full and then the water allowed slowly to run out of the boiler so that the kerosene on the surface of the water will have a chance to soak into the scale all

the way down from the top. After being softened by the action of the kerosene it is supposed that the scale will jar loose and work down to bottom of the boiler where it can be blown off.

Many threshermen find a continued use of graphite good in keeping their boiler free from scale. If the scale is very bad it may take quite a little while for the use of graphite to free the boiler from scale, but it should do it in time.

Question of A. B. B. Is water all right for tamping a charge of dynamite under a stump?

Answer.—No; such a practice is very wasteful. Tamping should always be as tight as the surrounding soil, to obtain the best results.

Question of J. W. S. What change is necessary in a safety valve that has been designed and set to blow off at fifty pounds pressure if it be desired to use the same valve on a boiler which carries one hundred pounds pressure?

Answer.—If you wish to change a pop safety valve so that it will blow off at a higher steam pressure, it is necessary to adjust this valve so that there is more tension upon the main spring, which holds the pop valve to its seat. The details of making this adjustment may be slightly different in different makes of safety valves, but the principle is exactly the same.

For instance, in one simple make of pop valves the valve consists of a main valve, beveled at an angle of forty-five degrees, which is held to its seat by means of a stem. This stem carries a cap which forms the lowest support for the spring, which supplies the tension to hold the valve to its seat. Between this flange at the bottom of the cap and the nut which forms the outer top of the pop valve a heavy spiral spring is inserted, which may be compressed by screwing down the nut which forms the outer top of the pop valve. When the steam pressure acting upward on the valve equals the load occasioned by the spring, the valve is on the point of opening. The more this nut is screwed down the more tension will be placed on the spiral spring, and the greater the steam pressure will be that is required to open the valve.

Safety valves are set at the proper point when they leave the factory. It is not usually advisable to increase the pressure on a boiler beyond that at which the pop valve is set by the manufacturer, since he usually sets the valve as high as he thinks it is safe to carry the pressure in the boiler.

If for any reason the valve has to be taken apart, the tension on the spring should be readjusted on a guage testing machine in connection with an accurate steam guage. The lever on the side of the valve is used to open it by hand and to make sure the valve is not stuck to its seat. Being sure that the valve is not stuck, the adjusting nut is screwed down until the valve pops off at the proper pressure as registered by the steam guage. By doing this adjusting on a guage testing machine there is no danger of one having a bad accident while doing the adjusting, as might be the case if one attempted to adjust the tension with the pop valve on an engine which was carrying a full pressure of steam.

Question of J. B. Is it safe to use metal tools to punch holes in dynamite cart-ridges?

Answer.—Yes; keep your knife clean when cutting, and your punch free of dirt and grit.

Question of F. B. I have a new Marsh pump for my steam engine. The pump does not start and work properly. It backfires steam through the suction hose. Can you give me any reason for this?

Answer.—In attaching a Marsh steam pump to your engine care must be taken to use pipe as large as the pump connections call for. The pipe should be tested to make sure that there are no cracks or flaws and it should be reamed at the ends in order that the area of the pipe shall not be reduced through the burr formed in cutting. Care should be taken to clean all chips and dirt from the inside of the pipe. Otherwise obstructions may find their way either into the steam cylinder or into the check valves of water cylinder, not only stopping the pump but causing damage to the moving parts. A check valve should be placed on the delivery pipe close to where it enters the boiler, and a stop valve between it and the boiler.

You say that you have not been able to get your pump started and that it backfires steam through the suction hose. This would seem to indicate that the valve between the boiler and the pump is not working properly. This may simply be because there is not water behind this valve. If you have connected your pump above the water level in your boiler, you are very likely to have trouble, because the check valve may not hold the steam for you. Possibly if you prime the pump real well and get the pump and the delivery pipe full of water, these valves will work all right. To be sure of best results, however, the pump should connect into the boiler below the water level. If this is done it

will be obviously impossible for steam to backfire through the pump and suction hose, because it will be impossible for steam to get to the water side of the pump. I am inclined to believe that your difficulty is that you have connected your delivery pipe into the boiler above the water line.

Question of E. C. J. Is it very dangerous to use an ax or a hammer to open a case of dynamite?

Answer.—Rough handling of any explosives is always more or less dangerous. Better use a wooden wedge to pry off the lid.

Question of D. P. J. I have an eight-inch centrifugal pump with a ten-inch suction and twelve-inch discharge, and raise the water on the discharge pipe about eighteen feet high in a hundred and ten feet of pipe. The suction pipe is ten feet long and there is four feet of water. There is a twelve-inch pulley on the pump and the pump is supposed to throw two thousand gallons of water a minute. What horse power of gasoline or kerosene engine will it require to run the pump? This pump will be used steadily only for fifteen to twenty days in a season.

Answer.—If your centrifugal pump throws two thousand gallons of water a minute and if you raise it six feet from water level to the pump and force it up eighteen feet above the pump, you will be lifting two thousand gallons of water a minute, twenty-four feet in height. These two thousand gallons will weigh approximately sixteen thousand pounds, and if you raise this amount twenty-four feet in a minute's time, you will be doing 384,000 foot pounds of work. One horse power is equal to 33,000 foot pounds of work a minute. Therefore, you will be doing about 12-horse power of work.

At first thought this would seem to indicate that a 12-horse power engine would be the size you require. This is not so, however, because your centrifugal pump does not work at one hundred per cent efficiency, and it requires more than a horse power of work applied to it, to make it do a horse power of work. Suppose we take the efficiency of your pump at sixty per cent. If the efficiency is sixty per cent then it will require approximately 20-horse power of work at the engine to run the pump to full capacity.

Would it be possible for you to use kerosene tractor of about 12-24 horse power to do this work, and then make use of the tractor for other jobs during the part of the year when you are not pumping? You say that this pump needs to be run for only fifteen to twenty days in a

EN-AR-CO MOTOR OIL

J. G. DUIS
SHATTUCK, ILLINOIS

The National Refining Co.,
Cleveland, Ohio.

Dear Sirs:

I have been using En-ar-co Motor Oil for some time and I am very satisfied with it. I have tried many other brands but En-ar-co is the best. It keeps my engine running smooth and cool. I have never had any trouble with it. I have used it in my tractor, my car, and my lawnmower. It is the best oil I have ever used. I have tried many other brands but En-ar-co is the best. It keeps my engine running smooth and cool. I have never had any trouble with it. I have used it in my tractor, my car, and my lawnmower. It is the best oil I have ever used.

Yours truly,
J. G. Duis

JOEL E. DUIS
SHATTUCK, ILLINOIS

Dear Sirs:

I have been using En-ar-co Motor Oil for some time and I am very satisfied with it. I have tried many other brands but En-ar-co is the best. It keeps my engine running smooth and cool. I have never had any trouble with it. I have used it in my tractor, my car, and my lawnmower. It is the best oil I have ever used.

Yours truly,
Joel E. Duis

ER CREEK FUEL AND OIL CO.
SHATTUCK, ILLINOIS

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Yours truly,
Er Creek Fuel and Oil Co.

STAFFORD GRAIN COMPANY
SHATTUCK, ILLINOIS

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Yours truly,
Stafford Grain Company

DIXIE AUTOMOBILE COMPANY
OAKLAND, CALIFORNIA

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Yours truly,
Dixie Automobile Company

THE NATIONAL REFINING COMPANY
Branches in 89 Cities 2104 Rose Bldg., Cleveland, Ohio

Best for transmissions, gears and differentials on motor cars and tractors

En-ar-co Motor Grease

Buy of your local dealer. If he cannot supply you—mail your order direct.

Mention The American Thresherman and Farm Power

"NORMA"

PRECISION BALL BEARINGS

(PATENTED)



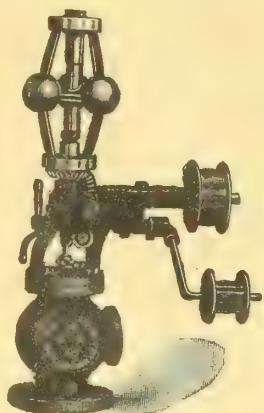
Satisfactory service is the one criterion of success, in a machine or in a part of a machine. One failure will wipe out a record that has been months in the making. Year after year, "NORMA" equipped magnetos and lighting generators hold their unchallenged leadership—solely by virtue of their consistently superior service maintained under the most exacting conditions known in the automotive world.

See that your Electrical Apparatus is "NORMA" Equipped.

THE NORMA COMPANY OF AMERICA

Anable Ave., Long Island City, New York
Ball, Roller, Thrust and Combination Bearings

Mention The American Thresherman and Farm Power



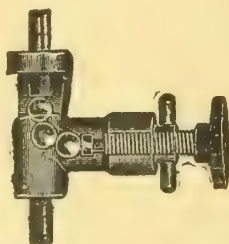
PICKERING

"THE GOVERNOR WITHOUT JOINTS"

Equipped with
**Ball Ranger
Speed Changer**

*Fitted to every
build of Engine*

The standard Governor for Threshermen, because giving wide range in Speed Adjustment, and close regulation.



The most durable Governor requiring least attention.

**PICKERING
Oil Pumps**
Simple and Reliable

Write us for particulars.

**The PICKERING
GOVERNOR CO.**

Portland, Conn. U. S. A.



season, and it seems too bad to have as large an engine as this tied up during the whole year for fifteen to twenty days' work. Certainly a kerosene tractor that would develop 24-horse power on the belt should be able to handle your pump with ease. Probably a 20-horse power would handle it nicely.

Question of What causes "misfires" and "hang-fires?"
B. H.

Answer.— Sometimes defective fuse; most of the time they are caused by improperly crimping the caps on the fuse or roughly handling the fuse. To prevent them, use cap crimpers, and protect the powder in the fuse from water when it is stored and in the field. Handle the fuse without unnecessary roughness, especially in cool weather.

Question of I wish to put a duplex water pump on my 30-horse power Rumely engine. Can I run this pump and force water into a boiler at one hundred seventy-five pounds pressure by using the exhaust from the engine? Will cylinder oil remove scale in a boiler? If so, how much oil should be used when using six tanks of hard water a day?

Answer.— I am afraid that you will not find it satisfactory to use the exhaust steam from your engine to operate your duplex pump. I think you will get much better results by plugging in directly on the boiler and taking live steam at full boiler pressure.

When mineral oil is introduced into a boiler it has a tendency to form around small particles of mud and scale and then settle to the bottom where it forms a tough rubber-like deposit which is very difficult to remove and which prevents heat from passing through into the water. A thin coating of scale on the heating surface, say one-thirty-second of an inch thick, is said by some authorities to do no particular harm, but on the contrary to protect the plate to some extent from corrosion. However that may be, it is certain that scale which has formed to any appreciable depth greatly impairs the steaming qualities of the boiler and the danger from overheated plates is greatly increased. A comparatively thin coat of scale insulates the plate from the water and prevents the heat from passing through freely, allowing the side of the plate next to the fire to become greatly overheated and softened. Most of the accidents due to a falling crown sheet or a collapse of the main flue can be traced directly to a coating of scale on some surface. Accidents from this cause are especially liable to occur when an effort is made to raise steam quickly. I should consider it, therefore, ex-

remely unwise to introduce lubricating oil into your boiler. The use of boiler graphite is an entirely different matter. This has a tendency to keep the scale softened and most persons consider it quite beneficial in its action.

Question of Why do powder companies say not to haul dynamite and caps in the same wagon?
B. B.

Answer.— Because if the caps themselves are accidentally set off they will do comparatively little harm, but if they explode near the dynamite they will be apt to set it off, doing much harm. Caps are much more sensitive to jars and shocks than dynamite.

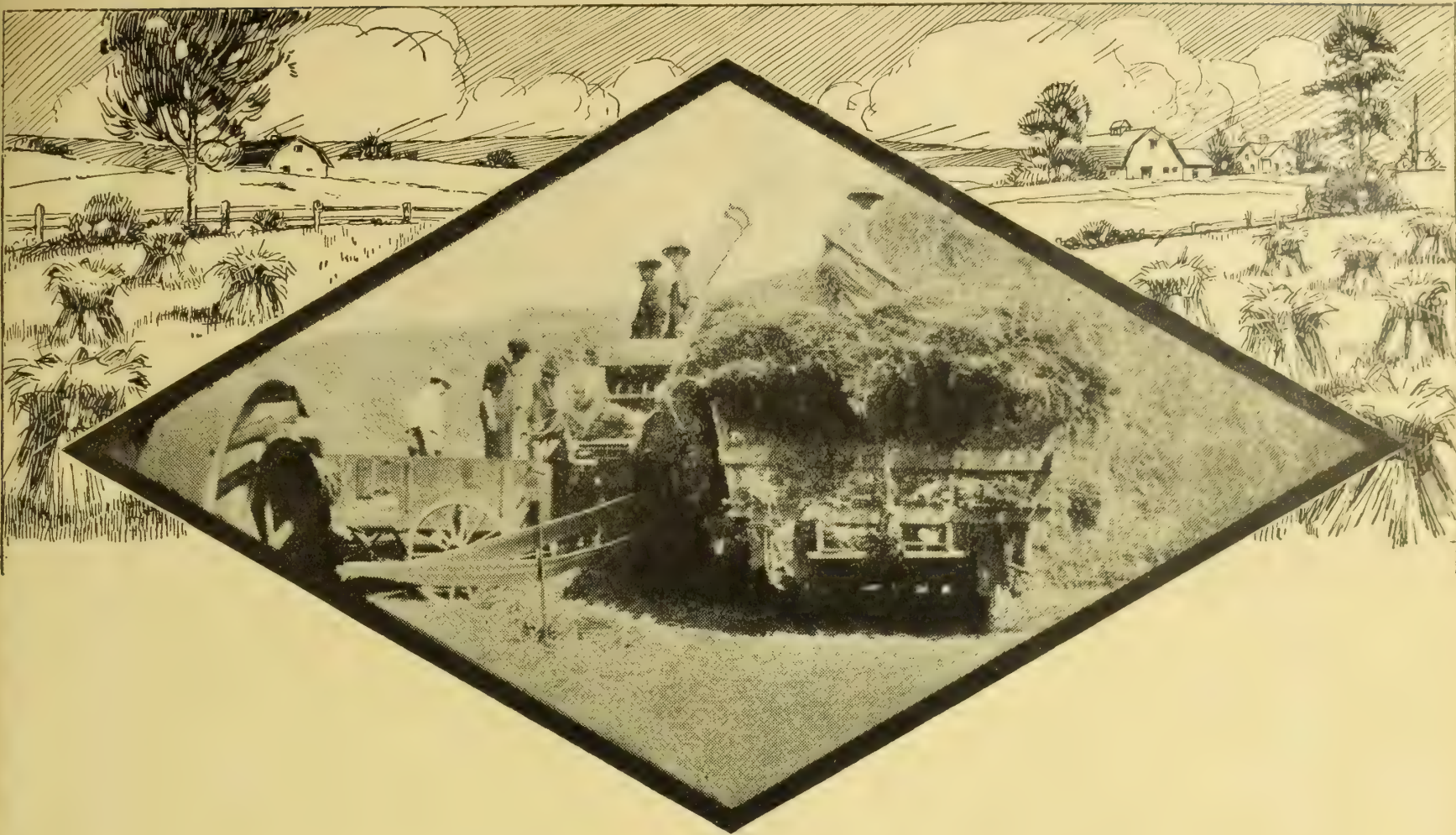
Question of The cross-head pump on my steam engine does not seem to

work as it should. The trouble seems to be that it makes a great deal of noise. It makes more noise than all of the rest of the engine put together. I opened the valve in the suction pipe about one-eighth of a turn to feed the boiler the right amount of water. It seems to me that the water does not fill the pump barrel, the plunger seems to hit the water in the pump barrel at nearly the end of the stroke, then it makes the valves jump and pound. It seems to me there should be a by-pass valve and pipe so you could return the water to the tank if it was not needed in the boiler, and have the valve in the suction pipe wide open. What would you think of an arrangement of this sort?

Answer.— One of the principle disadvantages of using a cross-head pump to force the feed water into a steam engine boiler is that the pump is noisy. It is possible, of course, that your pump is making more noise than it should, but even at best a cross-head pump makes lots of noise.

I see no good reason why you should not be able to make an arrangement such as you suggest so as to have the valve in the suction pipe wide open. It might be that this would cause the pump to work more quietly. If you put on such an arrangement I should suggest that you make the by-pass plenty large enough and put a valve in it so that you can regulate the flow of water going through the by-pass so as to get the exact flow of water into the boiler that you wish. This arrangement will use a little more power than your pump does at present, but I do not think this will be large enough to make any appreciable difference.

Whenever anything happens to the ignition and causes a miss in the motor, do not always lay it to the adjustment of the carburetor



A Handier Threshing Rig With Bigger Capacity

THE E-B LINE

- | | |
|---------------|--------------------|
| Plows | Grain Drills |
| Harrows | Sawmills |
| Cultivators | Manure Spreaders |
| Pulverizers | Tractors |
| Listers | Tractor Plows |
| Ridge Busters | Threshers |
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| Hay Loaders | Corn Shellers |
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E-B BRANCHES

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| Amarillo, Texas | Minneapolis, Minn. |
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| Fargo, N. D. | Sioux Falls, S. D. |
| Harrisburg, Pa. | St. Louis, Mo. |
| Indianapolis, Ind. | Trenton, N. J. |
| Kansas City, Mo. | Wichita, Kans. |

Export Office
Grand Central Palace, New York City

"Enough capacity for big custom jobs!" That's what farmers say about this E-B threshing rig—the 12-20 Tractor and the E-B Geiser Separator. For both the 12-20 Tractor and the E-B Geiser Thresher are built to deliver a volume of work far in excess of their rating.

Surplus power at the belt comes from a number of features of the E-B Engine. The finest anti-friction bearings are used throughout the transmission. Every bearing is well supplied with oil at all times. An enclosed intake manifold vaporizes every atom of kerosene before it enters the cylinder.

The E-B Geiser Separator combines capacity for big jobs with ability to do clean threshing under any conditions. It handles all kinds of grain with ease.

The heavy cylinder shaft is made of the best quality of steel, and runs in long self-aligning boxes. Warping or misalignment is impossible. All of the working parts have a rotary motion, giving a well-balanced thresher requiring comparatively little power.

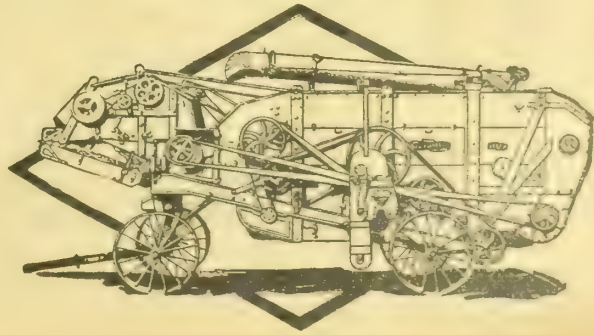
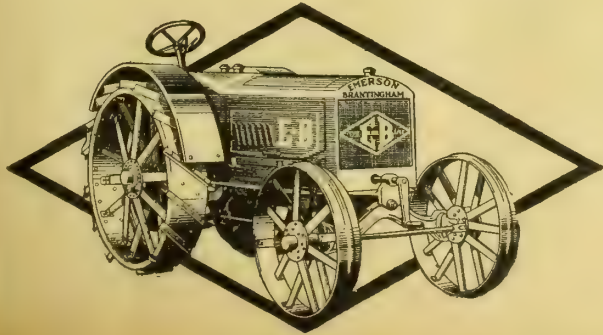
This E-B rig is ideal for individual use. It is compact, easy to operate and very durable. Let your dealer show you all of the features that make it a favorite among owners.

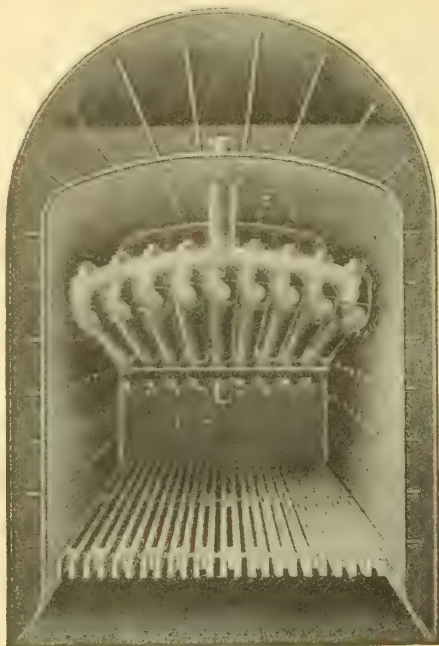
Emerson-Brantingham Implement Co., Inc.

Established 1852

Rockford, Ill.

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company





Save Fuel and get More Steam

Take a good look at this illustration—and you will clearly understand what a GUGISBERG TUBULAR ARCH can do for any steam

engine. It extends the heating surface of your boiler to within easier reach of the fire and at the same time causes a long flame which gives increased heat with a minimum of fuel.

The ordinary open fire box means a short flameway and a steady waste of fuel that runs into considerable money at present prices.

What Users Say:

Gentlemen:
I am highly pleased with the Gugisberg Tubular Arch, which I had installed in my 40-H. P. Reeves. It easily saves forty per cent of the coal, plowing and threshing.

E. C. Haynes,
Colby, Kans.

I like the Arch fine.
C. W. Bauer,
Upland, Nebr.

Your Arch has given entire satisfaction and is a coal saver.
John White,
Colby, Kans.

It is perfect.
Ed. Yates,
Madelia, Minn.

The Tubular Arch is the best thing I ever put on my rig.
George Schulte,
Mankato, Minn.

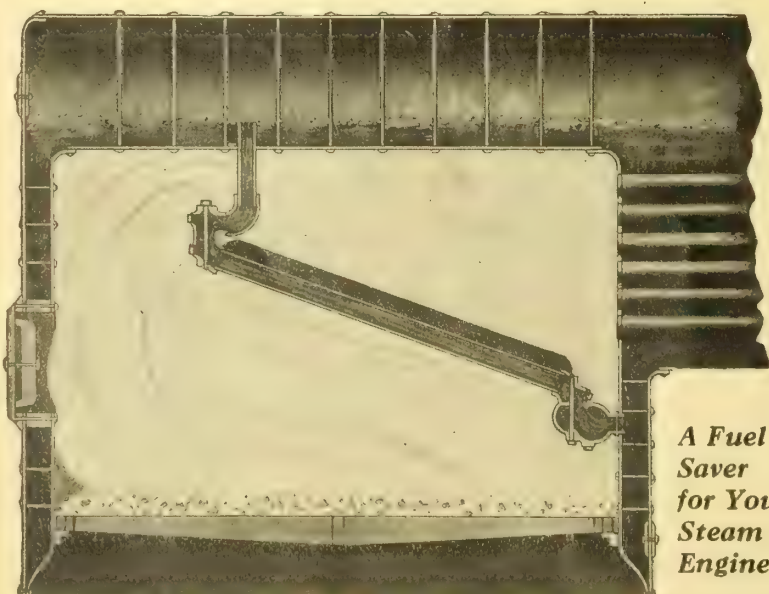
THE GUGISBERG TUBULAR ARCH corrects this condition. It establishes a long road over which the flame must travel, thus producing the greatest heat possible from every particle of fuel. The long flame also fills the fire box to all sides, preventing cold air pockets.

Now look at the lower illustration—a side view of the GUGISBERG TUBULAR ARCH—and note how a small quantity of fuel can be made to produce a big flame, which means more steam in less time than the ordinary boiler takes to produce a comparatively small head of steam.

With a TUBULAR ARCH installed in your boiler you can fire with any kind of fuel—straw, wood or coal, and save from 25% to 40% on your fuel bill. Present users absolutely disclaim any formation of scale.

Write us for more information, stating kind of engine, number of horse power and length and width of fire box inside.

The Gugisberg Tubular Arch Co.
St. Peter, Minnesota



A Fuel Saver for Your Steam Engine

Cash Plus Credit

FIGURES PROVE THE THRESHERMAN'S CASE

SOME men lose their prejudices slowly. It is time for the manufacturers who still think of the threshermen in twenty-five-year-old terms to cast the motes from their own eyes.

To illustrate: six or seven years ago, in southeastern Utah, one might see the tired horses and dusty wagons of immigrants from the Middle West. These pioneers had braved the hardships of struggling with virgin country to establish themselves as owners of low-priced lands rather than as renters of high-priced farms. Today they have passed through the hardest days of their struggles. Well improved "dry farms" dot the country south of Moab, north of Monticello. The man who thinks of these settlers now as nomads rambling about with six children, five chairs, a broken-down stove and three dogs, is seven years behind the times—and these seven are long, full years, too.

The thresherman was a pioneer; and the machine manufacturers were almighty glad that he was. In the days when custom business was precarious, the oily-tongued salesman was glad to sell a machine largely on time and paper, and then let the thresherman "root hog or die," trying to make enough money from new fields to pay principal deferred, interest on notes, depreciation and expenses.

This was part of the game. The thresherman was a good sport. He never quit hustling because he didn't like the rules.

Yet times have changed. The custom thresherman of today is almost without exception a leading farmer in his locality. He has land and expensive machines. He pays his bills. He expects men, owing money to him, to pay at the agreed time. The farmer with whom he deals is a business man, with cash and assets. Not only his bank account, but his banking credit, demand consideration.

Strange as it seems, some big men in industry have overlooked the true facts. When thinking of the motor industry, they think of conditions not thirty days old. When they think of the threshermen who buy the motors, they think of some Rip Van Winkle character, about thirty years in the past.

The American Thresherman and Farm Power has been busy securing some figures. These figures are given only as estimates, but they have been secured from men close to the field in each of the states shown and in many cases are based on Board of Agriculture figures.

We have figures in this office, received from some two thousand of our readers, which serve as a fine

cross-check in showing that the numerical strength and financial prosperity of the threshermen is not rated too high in the states shown. These figures make no effort to show personal property, livestock or machinery assets, simply to show the value of threshermen to the country as the owners of improved real estate.

We have letters that show a changed attitude on the part of the bankers. Credit is often a greater asset than cash. It permits the readier transfer of assets. No matter what cash he has on deposit, the modern manufacturer would be helpless without the aid of credit extensions in his business. The thresherman of today possesses ample credit. Below we furnish two examples from numerous letters received.

NUNDA BANK

ESTABLISHED 1873

NUNDA, N. Y., April 22, 1920.

Gentlemen:
Referring to your letter of April 5 regarding the financial standing of the threshermen of this locality will say: fifteen or twenty years ago, their standing generally was very poor, good ones being the exception. At the present time, we are pleased to state, conditions are reversed and the threshermen of this vicinity are generally considered good financial risks and are looked up to as business men. We understand there is an organization in this state which embraces a majority of the threshermen and to this we feel is largely due the credit for their financial success. We are pleased to be able to give you this kind of a report.

Yours respectfully,
F. G. OLF,
President.

THE SECURITY NATIONAL BANK

CAPITAL, SURPLUS AND PROFITS \$500,000.00
SIOUX FALLS, S. D., April 9, 1920.

Gentlemen:
We have been asked by the president of the South Dakota Threshermen's Protective Association for a statement as to the financial standing and reliability of the threshermen generally in this community, and will state that we have business relations with a great many threshermen in this vicinity and from our dealings with them, and from our acquaintance with threshermen generally, we have no hesitancy in saying that the great majority of the threshermen are thoroughly reliable both financially and otherwise. Most of them are property owners and there are no chattel foreclosures being had upon rigs belonging to threshermen. This is in contrast to what conditions were in this state twenty-five years ago.

Yours very truly,
JOHN BARTON,
Vice President.

These letters, from two widely separated localities, indicate the trend of all of them. They give a view of the credit standing of the threshermen of 1920.

Below we furnish some figures that speak for themselves. The letters bringing these figures made interesting reading. One was from a university professor. Another was from a practical thresherman. A third was from an implement man. Most of the average values of farms given were based on the belief that all threshermen, owners, renters or town men, would average the size and amount of farm shown. Letters from Michigan and South Dakota, for example, stated that ninety per cent of the total number of threshermen were farmers. To be conservative, we have taken only ninety per cent of the number of threshermen for each state to arrive at farm values for the threshermen of the state. We have secured figures for twelve grain-producing states.

Name of State	Number of Threshermen	Average Size of Farm	Average Value per Acre	Average Value each Farm	* Total Value of Farms
Indiana.....	7,000	100	\$150	\$15,000	\$94,500,000
Iowa.....	25,000	80	350	28,000	630,000,000
Kansas.....	16,000	160	75	12,000	172,800,000
Kentucky.....	2,500	200	200	40,000	90,000,000
Michigan.....	3,500	80	85	5,100	16,065,000
Minnesota.....	7,000	150	90	13,500	85,050,000
Oklahoma.....	4,000	240	60	14,400	51,840,000
Ohio.....	8,500	100	200	20,000	153,000,000
Nebraska.....	6,000	240	75	18,000	97,200,000
New York.....	3,500	75	100	7,500	23,625,000
New Jersey.....	200	65	100	6,500	1,117,000
South Dakota.....	6,500	200	175	35,000	204,750,000

(*To reach the total values of farms owned by threshermen in each state, we have assumed throughout that ninety per cent of the threshermen were owners of farms of average size and value and multiplied the value of the average farm by ninety per cent of the number of threshermen for that state.)

From these figures we find that the average thresherman possesses in real estate alone the snug sum of \$18,000. When we consider the present values of livestock and machinery, it is apparent his assets will come to a higher figure. Note that we have not deducted the ten per cent listed as non-owners of farms to secure this \$18,000 amount. The average thresherman owns \$18,000 worth of farm land.

This chart does not over-estimate the importance of the average thresherman. From figures we secured from entirely different sources, some weeks ago, we arrived at \$15,000 as the average thresherman's assets.

Method for Increased Farm Production

THE biggest problem with the farmer today is how he is going to increase production with the scarcity and high price of labor. He can undoubtedly increase this to a great extent by using power of machinery, but he is then confronted with the problem of sufficient help to properly operate his equipment and it is essential that the big farmer today have one or more men to assist him in the general business of operating his farm at a profit. One of the problems in keeping labor on the farm has been that conditions in towns have been more alluring to him, more comfortable and convenient.

Is there any good reason why the farmer cannot offer the same comforts and conveniences as a method of keeping his help that can be obtained in any town or city?

The largest and most up-to-date manufacturing concerns in the country today have found that it is necessary and highly essential, in order to keep their labor, to provide rest rooms in their plants and other means that will promote the general welfare of the working man, and by this means the factories find that they can get increased production, better loyalty of their men and cut their cost of labor turnover.

I believe that it is equally true on the farm that if the farm home is made comfortable and convenient that the farm labor is going to be better satisfied, will take a greater interest in things in general about the farm, and will in the end make

In reaching this smaller amount, we used an acreage value that was extremely low. In it, however, we included the value of farm machinery. Livestock assets were disregarded.

Can any similar great body of men show as great financial stability? Improved land means the safest of investments. Allowing the assets used in other trades and professions to be counted as equivalent to land assets, is there a body of carpenters, or doctors, or blacksmiths, or lawyers, who can show an average estate of \$18,000? We think not.

"Let your light so shine before men" that they may think of you in terms of the year 1920.

himself of greater value to his employer.

One of the big discomforts of farm life has been the lack of comfortable and sanitary toilet facilities. In the city everyone enjoys the use of bathroom with hot and cold water and with these same kind of conveniences which are obtainable on the farm, farm life would be more enjoyable. By the farmer eliminating the outside privies which are always sources of disease and discomfort and supplanting them with some of the popular modes of indoor toilet facilities that are used today, he can protect the health of himself, family and employees and eliminate the possibilities of disease, lack of efficiency from disease and eliminate doctor bills.

No individual has to go further than his own state department of health or his own physician to get complete information as to the disease, filth, etc., that emanates from the unsanitary outside toilets, and in my judgment if every farmer was to look into the possibilities of home comforts a little closer and eliminate the fly-breeding, disease-spreading outhouses that he would receive a magnificent and satisfying profit from his investment.

"Oh, Clara!" exclaimed the young man on the sofa: "you have broken those two cigars I had in my pocket.

"It's really too bad, George," replied the sweet young thing, "but why don't you buy stronger cigars?" —Yonkers Statesman.

TRY THE RED SEAL SPARKER



A Gang of "Red Seals" Handled as One

Your same trusted friends—the Red Seal Dry Batteries—but easier now to handle. Ready for you now at your dealers.

Red Seal Sparkers do away with bother and loss of time in fussing with short wires and many connections—of short circuits in connecting wires—of handling an awkward bundle of batteries, etc. New double waterproof casing lengthens battery life. Only two posts to connect—large and square to turn easily with fingers. A broad web strap for carrying from one job to another—from Ford to tractor, farm engine or to lighting plant at night.

Best for Every Farm Use

Wherever a spark is needed, the Red Seal Sparker will serve you best. Handiest thing in the battery line you ever saw—and Red Seal sterling quality all through.

Ask Your Dealer

Dealers handling Red Seal Dry batteries also have the Sparker. Buy the Sparker for its convenience and saving. Your dealer has "How to Run the Gas Engine—Simplified"—our famous hand-book for engine owners. Ask him for Free Copy.

MANHATTAN ELECTRICAL SUPPLY CO., INC.
New York, Chicago, St. Louis, San Francisco
Factories Jersey City, St. Louis, Ravenna, O.

"The Guarantee Protects You"

Mention The American Thresherman and Farm Power



CARTON BELT

Heavier Duck—More Rows of Stitches.
Selvaged Edges—Always in Stock.

HUDSON MFG. COMPANY

MANUFACTURERS AND WHOLESALEERS
Branch: Omaha, Neb. Minneapolis, Minn., U. S. A.

Mention The American Thresherman and Farm Power



"AMERICAN" PORTABLE FARM SAW MILLS

Have added to the earnings of farmers from one end of the country to the other—by enabling them to make their own lumber from their own wood lots, or by doing custom sawing for their neighbors. They are the most popular farm mills on the market—simple, sturdy, requiring little power, needing no skill or experience to operate.

Turn Trees Into Money

Lumber was never so high. Standing timber is idle investment. Your tractor or farm engine, driving an "American" Saw Mill, will give you the lumber you need at the mere cost of sawing. Or you can saw lumber for your neighbors with good profit, at odd times. Write for the catalog—prices right, deliveries prompt.

AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, N. J.
71 Main Street

NEW YORK, N. Y.
1371 Hudson Terminal

The First Avery Tractor Built is Still Running—



Mr. Gerry now has a 25-50 Avery Threshing Outfit like the above.

New Avery Outfit Bought by Same Owner

The first Avery Tractor was bought by Frank M. Gerry, St. Charles, Minn., many years ago. Now after long, hard service with this tractor, Mr. Gerry has bought a complete new Avery Threshing Outfit consisting of a 25-50 H. P. Avery Tractor and a "Yellow-Fellow" Champion "Grain-Saver" Thresher. In relating his experience with his first tractor, Avery Tractor Number One, Mr. Gerry said:

"I bought the first Avery Tractor built, a 20-35 H. P. I used it for every kind of work imaginable. I plowed, disc-harrowed and seeded thousands of acres, shredded corn, graded roads, threshed and did many other kinds of farm work. I always got good, dependable power from it. I believe the Avery Tractor is the easiest to run and the most convenient tractor to handle. That's why I bought my second Avery outfit and that is also why I recommend the Avery Tractor to anyone who wants a dependable and reliable tractor.

"In threshing it handles much easier than a steamer and gives an absolutely steady stream of power. *It's just like threshing with water power.*"

Avery Features the Reason for Avery Success

Avery Tractors have many exclusive features that have enabled them to go out into the field, do good work and stand up a long time as this old Avery Tractor Number One has

done. Some of these features are: The "Draft-Horse" Motor and the "Direct-Drive" Transmission; the Gasifiers with centrifugal action which turns kerosene and low grade fuels into gas and burns it ALL; two-bearing practically unbreakable Crankshaft; Adjustable Main Bearings; Valves-in-Head; Thermo-Siphon Cooling System, etc. All these features are found in Avery Tractors from 8-16 to 40-80 H. P. *No other tractor has even half these features.*

And that is why Avery Tractors are in successful operation in every State in the Union and 68 foreign countries.

The Avery Line

includes a complete line of Tractors for every size farm; a complete line of "Power-Operated" Tractor-Drawn Machinery and a complete line of Roller-Bearing equipped Tractor-Driven Machinery. Write for the Avery catalog describing the Avery Line.

It Pays to Averyize

AVERY COMPANY, 334 Iowa St., Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and San Francisco

Distributors: AVERY COMPANY OF TEXAS; Dallas, Amarillo and Beaumont, Texas
Also Other Principal Machinery Centers

AVERY

Motor Farming, Threshing
and Road Building Machinery

Frank M. Gerry, St. Charles, Minn., bought the first Avery Tractor built. It is still in operation.

Read What He Says Here:

Avery Company,
Peoria, Ill.

Gentlemen:

I bought the first Avery Tractor built, a 20-35 H. P. and I have since bought my second Avery—a 25-50 H. P. and an Avery "Yellow-Fellow" Champion "Grain-Saver" Thresher.

My first Avery tractor was the BEST tractor at that time, just as my present Avery is the BEST tractor at this time, and I consider that both of these tractors are years ahead of other makes.

In regard to workmanship, quality of material and for ease of handling there is no comparison, as they can be handled as easily as any steamer and give absolutely steady and dependable power. As one old thresherman remarked this fall after watching my threshing rig run awhile, "It's just like threshing with water power."

I sold my 20-35 tractor and my outfit is now 25-50 and 28x48 separator with Avery feeder and I consider this an ideal outfit for this section of the country.

My separator has run eight falls and while I am not making a business of threshing I have threshed 175,000 bushels with practically no repairs of any kind, and have yet to put in a new tooth in either cylinder or concave—and I have threshed several pitchforks. A record I think that is hard to beat.

This fall I got a clover hulling attachment which does fine work, in fact I think as good as the average huller.

One day I pulled clover and the next I threshed, then I shocked corn without damage to feeder or machine, and now I think I can thresh anything.

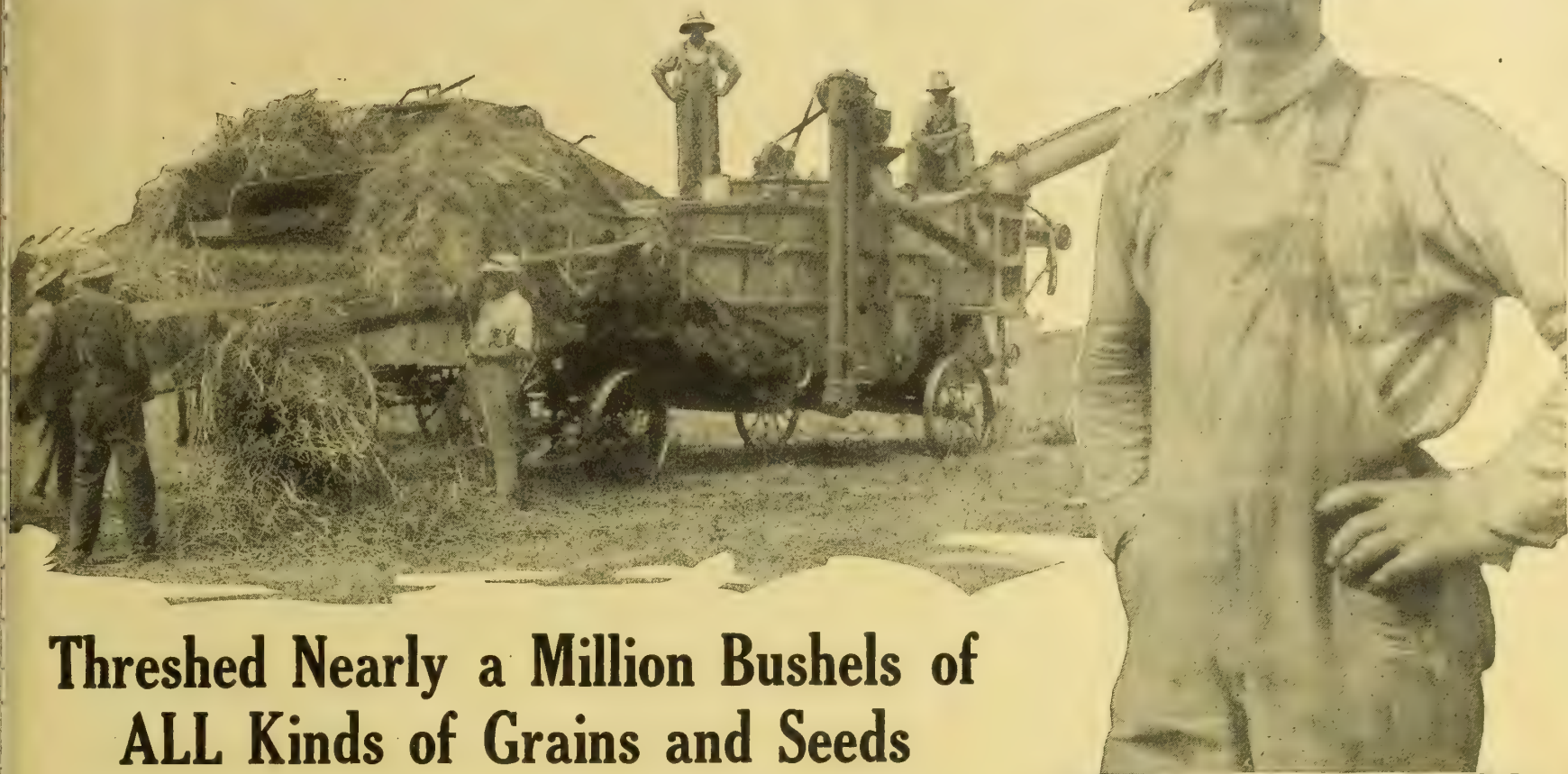
Yours truly,

FRANK M. GERRY.

Photo of the first Avery Tractor built as it looks today

"She's Been Threshing Since 1892— and Is Good for a Long Time Yet"

H. E. Myers, owner
of Avery Separator
No. 63.



Threshed Nearly a Million Bushels of ALL Kinds of Grains and Seeds

Avery "Yellow-Fellow" Separator No. 63 threshed its first bushel of grain in the fall of 1892. In the fall of 1919, it completed its 28th threshing season after having threshed in all this time approximately one million bushels of various kinds of grain and seeds.

In each of the twenty-eight years this separator has been in service, canvas tests were made, and it was shown that this machine saved 99 52-100% or more of the grain threshed at all times. The highest test made with this machine was 99 99-100%—which means practically perfect work.

Avery Threshers Last a Long Time

This is only another instance of an Avery separator that has done good work and lasted a long time. We have hundreds of testimonial letters from Avery owners who have had their machines five, ten, fifteen and twenty years.

One reason why an Avery separator lasts longer than other makes is because the construction of the frame is such that it will withstand all twists and strains. Cross-rods run underneath the deck, holding the frame in shape. Also every part of an Avery thresher frame is dipped in paint before it is assembled. This means that every joint is covered with paint and so prevents the joints from rotting first—the weakest spots in some makes of separators.

The crankshaft is also extra large in diameter. The cylinder teeth are made of genuine tool

steel and are *guaranteed for life against breakage*. The straw rack is so well built that several men can stand on it even when running. The windstacker housing is made of tank steel. All parts that have any work to do are *not* attached to the Avery Separator by means of screws but are bolted on. These and many other features make the Avery Thresher an extra long-lived machine.

Hyatt Roller Bearings

Avery Threshers are also easier to operate and lighter running because the cylinder and windstacker fan shafts run on Hyatt Roller Bearings.

Avery Threshers also have many other exclusive features. With an Avery you save the grain better because it is equipped with the famous I. X. L. Grain-Saving Device, which has fingers that dip into the straw, tear the bunches apart and get the last kernel out of the straw. Because of the special cleaning features, owners tell us that they clean the grain better with an Avery Thresher, and often get a better price for it.

Run Steady—Easy to Operate

Avery Threshers are "money-makers" and "job-takers" for the threshermen and "grain-savers" and "grain-cleaners" for the farmers. It will pay you to get an Avery to thresh with or thresh for you. Built in "Yellow-Fellow," "Yellow-Kid" and "Yellow-Baby" sizes for every requirement.

Ask for the Avery Catalog or Special Thresher Circular.

Avery "Yellow-Fellow" Separator No. 63 has now been in operation 28 seasons. It is still saving 99 52-100 per cent or more of the grain.

Read What the Owner Says:

Mt. Pleasant, Iowa,
July 30, 1919.

Avery Company,
Peoria, Ill.

Gentlemen:

I own Avery "Yellow-Fellow" Separator No. 63, and it has been in operation since 1892.

I have threshed timothy, millet, barley, oats, wheat, rye, buckwheat, beans, sorghum seed, etc., with this machine.

The elevator man at Mt. Pleasant says that the grain threshed from this machine was the cleanest of any received from any machine in this county.

Former elevator men have said that they would sooner have grain and seed threshed through my Avery Separator than any other machine in that part of the country. The grain tested 60 lbs. to the bushel shelled.

From canvas tests made every year this separator saves 99 52-100% or more of the grain threshed. The highest test ever made with this machine was 99 99-100%.

The Government inspectors didn't bother us at all, but stopped other makes of machines in this territory. They knew I had an Avery "Yellow-Fellow."

Farmers who have had their grain threshed with other makes of separators much newer than mine—some of them first season's run—have turned them down for my Avery.

I have gone right in the field and finished threshing the grain and seed where other machines had started and couldn't thresh clean, and put the grain in the wagon where it belonged.

If I live fifty years more and am able to look after this machine, it will last just that much longer.

I wouldn't take this old machine of mine for a new one of any factory today.

If I were going to get a new machine I would certainly buy an Avery, because I believe the Avery machinery is absolutely the best on the market.

My old Avery is running smoother than any new machine in this territory.

I have been a thresherman for the past thirty years and have threshed with all makes of separators. I believe I know a good machine when I see one.

Yours truly,

H. E. MYERS

AVERY COMPANY, 334 Iowa St., Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and San Francisco

Distributors: Avery Company of Texas; Dallas, Amarillo and Beaumont, Texas

Also Other Principal Machinery Centers

AVERY

**Motor Farming, Threshing
and Road Building Machinery**



The CASWELL Adjustable Belt Guide

is the standard of America and is superseding every other make. It is adapted to all separators.

The Caswell Hinged Belt Reel swings the belt under the feeder out of the way and out of storms, protected from rain and rot.

The CASWELL Automatic Binder Hitches

Adapted to all tractors and binders. Will draw any number of binders from one to five. It is the simplest, strongest, cheapest and best.

We want you on our mailing list. Send us your name by return mail. Dealers wanted.

Caswell Mfg. Company, 120 Vine St., Cherokee, Ia.



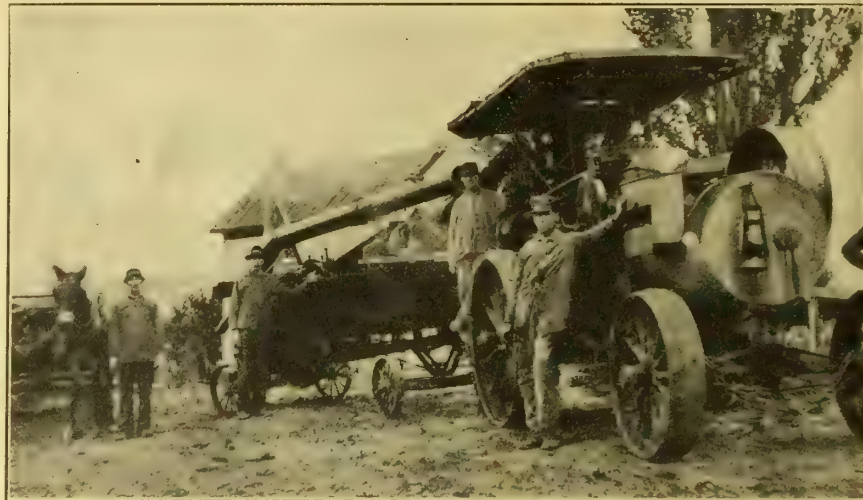
Correspondence

I am enclosing a picture of our rig ready to move after shredding the first crop last fall with a new eight-roll Special McCormick. We surely appreciate what you are doing for the threshermen.

Enclosed you will find check for one dollar for four of your settle-

ment magazines to my farmer friends to let them get the idea as you advise it, how to make threshing a business. This has helped me greatly to get a little better price for this class of work.

Several years ago I spent a winter along the south shore of Lake Supe-



New Eight-Roll Shredder and Engine Owned by Siebe & Egbert.

ment books. We had two as a premium last year and will say a thresherman's outfit is not complete unless he has the settlement books.

SIEBE & EGBERT.

Stendal, Ind.

rrior at the copper mines. The machinery in these mines interested me very much. I wondered why it was so necessary for a big, rich concern to keep their engines in such good condition. I decided that if this care of machinery was paying for the rich companies it would be paying for the threshermen also. So I have tried this stunt, and I also have been reminded of it through the columns of your magazine.

I have fitted up my Case 18-horse power engine with brass grease cups, using scarcely any oil except through the valve and piston. There is no oil wasted or thrown around on the other parts of the engine and on the engineer. When Saturday night comes my engineer looks like a gentleman instead of a grease pot. I also took a blow torch and took off the weather proof coat of varnish of the boiler jacket, brass, etc., that the factories put on, and then polished the brass parts which put a beautiful finish to the outfit. You may think that this will not last long, but I have a can-

I have been in the threshing game for a number of seasons. I have owned and operated a complete Case outfit for eight years. I have tried to avoid price cutting and many other things that hinder making threshing a success. Grain threshing today is a profession and must be made a business, as you have taught us in your magazine. I have thoroughly studied your paper, especially the question and answer department and the organizing of threshermen. I attribute my success as a thresherman mainly to your magazine. Some people think that a thresherman can and ought to thresh grain for common laborer's wages and say nothing about his machinery which now costs from four to six thousand dollars. I have handed out a number of your



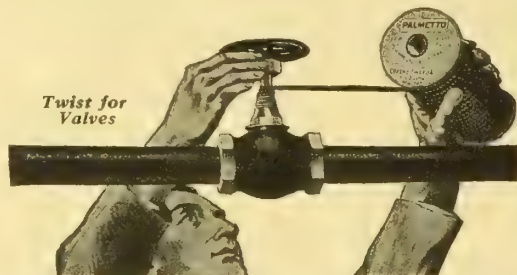
Isaac Melin, Norma, North Dakota, Threshing with a Gas Engine.



Keep the Machines In Continuous Operation by Using

"PALMETTO" PACKING

Made to give long, satisfactory service under hard conditions. The small amount of packing required for a stuffing box costs far less than the labor of applying it, and for that reason a long-service packing is economical because it saves labor and keeps the machines constantly employed.

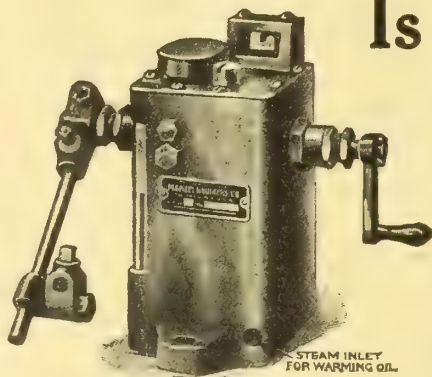


If in doubt, let us send you a working sample. No charge.

Green, Tweed & Co.

Sole Manufacturers
109 Duane St., New York

An Oil Pump That Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H.P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.

311-313 Babcock Street

Buffalo, N. Y.

opy top on my engine and on this top I have fastened canvas curtains all around, so in damp and stormy weather these curtains are pulled down to keep the engine dry and in good condition. In cold weather these curtains help to keep the pipes from freezing. The separator, too, gets its share of care. I have also fitted that with grease cups and every bearing is in perfect shape. Of course, we can not keep it as clean but we house it as soon as our run is over with. Some people may think this a foolish idea, but I have had my engine for eight years and it really looks like a new one.

F. A. SPANGLER.
Blanca, Colo.

I enjoy your paper very much and I am enclosing a check to pay for one year for myself and one year for my brother. I run a Frick thresher and



Charles Peters of Newcomerstown, Ohio.

a Huber 12-horse power engine. I believe the Huber is hard to beat. I also have a Russell sawmill outfit. I have operated sawmills and threshing machinery for ten years, ever since I was nineteen years old.

CHAS. PETERS.
Newcomerstown, O.

In the fifteen years I have threshed I have been a reader of your paper. I have found in my threshing experience that there is no motto that applies to threshing quite as well as one that I think Franklin wrote when he said, "If you with the plow would thrive you must either hold the handles or drive." I have never known a man to make a financial success at the threshing game unless he has been on the job himself. To make a success of threshing, a man must have a lot of good qualifications. He must have some business ability, he must be a good worker and he must be a machine man.

I do not think there is much difference in the kind of machine a man uses if it is of the right size and has the proper equipment for the locality that it is to be used in. In



How soon does your engine begin to knock? After 500 miles? Or after 5,000 miles?

WHEN your automobile, truck or tractor is new—or when the carbon has just been removed and the valves expertly ground—the engine has real pulling power.

How soon will the knocks begin to develop? Will the engine be badly carbonized after 500 miles? Will you have to shift gears for the hills which you should take so easily?

Excess carbon causes most knocks. And excess carbon is caused by two things: Improper lubrication and too rich a gasoline mixture.



Keep down the carbon deposits

Ordinary oil breaks down under the terrific heat of the engine—200° to 1000° F. Sediment forms. The oil is thinned out. It passes the pistons, fouls the valves and spark plugs, and carbons the piston heads. Pistons are often badly scored and must be replaced.

To meet this growing difficulty engineers experimented for years. Finally they discovered the famous Faulkner Process, used exclusively for the production of Veedol.

Veedol resists heat. It reduces sediment by 86%. The sediment

test, illustrated by the two bottles below, shows clearly the superiority of Veedol. The small amount of sediment means a heavy, durable oil film and almost no carbon.

Veedol Special Heavy is recommended by many Fordson Tractor and International Harvester Company dealers.

Make this simple test with your car or tractor

Drain oil from crankcase, wash out with kerosene, then fill up with Veedol.

Make a test run. The engine will have new pickup and power, and a lower consumption of oil and gasoline.

If the engine should now carbonize quickly it means that new piston rings are needed.

Buy Veedol today

Leading dealers have Veedol in stock. Ask for it today. Every Veedol dealer has a chart which shows the proper grade of Veedol for your car.

The new 100-page Veedol book will save you many dollars and help you keep your car running at minimum cost. Send 10c for a copy.

TIDE WATER OIL

Sales Corporation
1539 Bowling Green Bldg.
New York City

Branches and distributors in all principal cities of the United States and Canada



Ordinary oil after use
Sediment formed after 500 miles of running.

Veedol after use

INSYDE TYRES

genuine inner armor for auto tires. Double mileage; prevent punctures and blowouts. Easily applied without tools. Distributors wanted. Details free.

American Accessories Company Dept. T-2 Cincinnati, Ohio

300 bu. more

Free Book Tells How to Get Them

Do you know that you can take that steam threshing engine of yours and easily, quickly and cheaply increase and improve its power so that you can thresh from 200 to 300 bushels more per day than you have been getting without adding a dollar to your running expenses? Our free, illustrated book for threshermen tells just how you can do this. Send for it today. A postal will do. Just state the make of your engine, horsepower, whether double or single and say "Send me your free book for threshermen."

GOULD BALANCE VALVE CO.
300 Maple Street KELLOGG, IOWA

ENTERPRISE SAW MILLS.

Built Sturdy for Service

An Offset to High Operating Costs

By their sturdy construction, the several time-and-labor-saving features in their operation and their accuracy of sawing, operators are finding

ENTERPRISE SAW MILLS

a wonderful offset to high operating costs.

Enterprise mills are made in various sizes and in both the Portable and Stationary type.

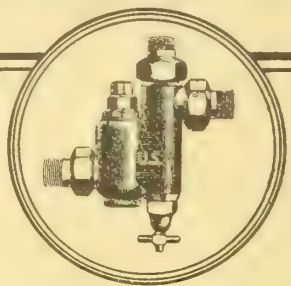
Write for Catalog

The Enterprise Company, 1050 Main St., Columbiana, Ohio

Makers of Saw Mill Machinery

Eastern and Export Office, 136 Liberty Street, New York

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam traction field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

LUNKENHEIMER
AUTOMOTIVE
ACCESSORIES
THE LUNKENHEIMER CO.
CINCINNATI

WRITE FOR CATALOGUE NO. 4-C

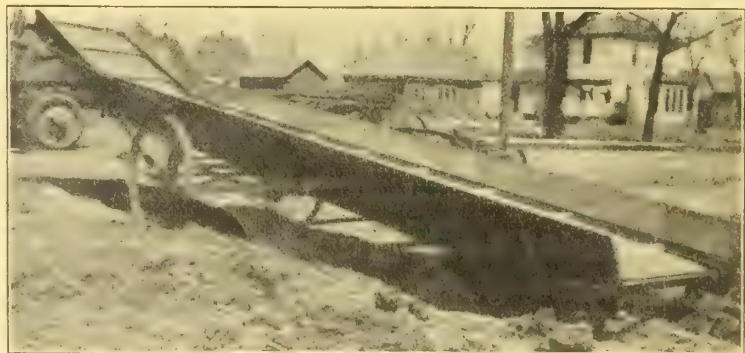
BELTING HOSE AND PACKING

LEATHER	STEAM	SPIRAL PISTON
RUBBER	WATER	SQUARE FLAX PISTON
CANVAS	SUCTION	RED SHEET
ENDLESS THRESHER	GASOLINE	ASBESTOS HIGH PRESSURE

Write for our latest price sheet

KANSAS CITY RUBBER & BELTING CO., 712 Delaware Street, KANSAS CITY, MO.

Threshermen—How Would You Like an Extension Feeder That is as Easy to Pitch Into as This One?



Write for catalog that contains prices and description of this Wonderful Time and Labor Saving Extension, as well as all other supplies that a thresher needs.

Our big catalog is a handy index to every item needed around the threshing outfit—

Rubber Thresher Belts	Stay Bolts	Log Chains
Canvas Thresher Belts	Special Cap Screws	Oils
Seamless Boiler Flues	Hose, Belting, Packing	Low Down Ext. Feeders

Let us mail you the catalog. It's free.

GRABER SUPPLY COMPANY

Hutchinson, Kansas

this locality, the machines nearly all are made in Michigan and that helps us to get repairs and I believe it is a good thing for the owners.

I think that the owner or boss of the rig should be at the separator end, because at the separator is where the work is being done and I think the owner should be where the work is being done. The first years that I threshed I ran the engine because I liked that part of the work the best, but now I am at the separator end. I never had any trouble to get a man to keep the wheels going at the engine end of the rig. I have had four or five boys learn to be engineers on my engine without delaying the work or doing any serious damages to the engine. Of course, I always kept a good watch on both ends of the rig. I always helped them on the road and when setting. I want to say that a good boy who likes an engine will soon make a better engineer than some old engineer that thinks he knows so much that there is nothing more for him to learn. I do not think any man has threshed long enough to know everything about a threshing machine. There is always a chance to learn.

Another thing a man in business should do, is to read papers pertaining to his business. In some business there are several of those papers, but in the threshing business there is but one real paper in the United States, that I know of, and that is The American Thresherman and Farm Power. If the young men in the threshing business would read this paper from cover to cover, advertising and all, they would not have to read so very many copies before they would know as much about threshing as some of the old timers that never do any reading.

Before I close I am going to tell you how I make my collections after threshing. I used to go around collecting like most of the threshermen do, and find one man at home but a mile back on his other farm, and the next man at home but without the money, the next man had gone to town, the next man would pay the next time I came, and so it would go on all day and maybe by night I had hardly collected enough for my wages for the day. Sometimes I spent several days collecting, and I would rather work than ask for money. A few years ago I tried a different way and found it to be successful. When I get through threshing I write each man a letter telling him I need the money and ask him either to send it to me or leave it at the bank. These letters always find the men and their wives at home, and I do not have to throw off the odd cents either. I can write the letters in a half day while I could not do much collecting in that time.

ALBERT F. WIERINGA.

Middletown, Mich.



One Man Saws 25 Cords a Day

The Ottawa Log Saw falls trees or cuts off stump level with ground. Saws up logs, cuts up branches, ice cutter, runs pump jack and other belt machinery. Mounted on wheels. Easy to move anywhere. 10 Year Guarantee. 30 Days Trial. Write for Free Book and Cash or Easy Terms. OTTAWA MFG. CO., 2211 Wood St., Ottawa, Kans.

FREE Puncture Proof TUBE 6000 Mile Guarantee

UNION TIRES represent the highest standard in reconstructed tires. Their reinforcement of 4 extra layers of fabric reduces greatly blowout and puncture possibilities. Over 200,000 in use. To further increase mileage, we include with every tire ordered a PUNCTURE PROOF TUBE FREE that under ordinary conditions will last ten to 20,000 miles. Our 5,000-mile tire guarantee certificate with every tire.

Prices Include Tire and Tube

30x8.....\$7.40	32x4 1/2.....\$12.00
30x3 1/2.....8.50	32x4 1/2.....12.50
32x3 1/2 S.S. only 9.10	34x4 1/2.....13.15
31x4.....10.35	35x4 1/2.....13.40
32x4.....10.70	36x4 1/2.....13.85
33x4.....11.15	36x5.....14.85
34x4.....11.50	37x5.....14.95

Reliner Free With Every Tire

State whether you want straight, side or clincher, plain or non-skid. Send \$2 deposit for each tire ordered. balance C.O.D., subject to examination, or 5 percent discount if full amount is sent with order.

UNION RUBBER COMPANY

Dept. 145, Racine Ave. and 15th St., Chicago

Quality-Service
SP
DESIGNERS
ILLUSTRATORS
ENGRAVERS BY
ALL KNOWN
PROCESSES.
PHONE
GRAND 5130

STREISSGUTH-PETRAH
ENGRAVING COMPANY
West Water & Wells Sts. Milwaukee.



Don't Throw Your Good Reliable Iron Pulleys Away

The Buller Lagging Stretcher eliminates all the trouble that you have had in covering pulleys. This little machine will do a wonderful job of covering pulleys and do it in a surprisingly short time. Adjustable for different sizes of pulleys. Sold on trial as are all other Buller products.

Send for catalog giving price and further information.

Buller Coupler Company
Hillsboro - Kansas

As I am a subscriber to your welcome paper and a thresherman I will send you a photo of my corn husking outfit. I own a 19-horse power Port Huron Longfellow steamer, a 33x54 Rusher grain thresher, and a Rosenthal Big Four corn husker.

I think the Port Huron is one of the best engines made. They are easy to handle and certainly are economical on fuel and water. They will throw the least sparks of any traction engine made, owing to the deep fire box, long flues, long smoke box and gentle exhaust from compound cylinders.

My engine is fully equipped, including electric lights, Watson governor and Travis rocker grates. I run my electric lights from a generator belted around my crank disc, but I am going to get a small steam engine about 1/2-horse power to run my generator and then I will have lights whether my big engine is running or

ran my own engine. We filled a twelve by forty foot silo of about one hundred ton capacity in seven hours, and I used only two small tanks of water and one-half ton of cheap coal.

In the fall I have all the corn husking I can handle. I run my engine husking and hire two men to feed and a waterboy to haul water and look after the husker. I charge four dollars an hour and then the farmers get their corn husked for less than four cents a bushel in fair corn. I own and live on an eighty-acre farm so you see I have plenty of work to do.

Now, boys, to be a good thresherman you must hustle every minute, understand your machine, do a good job, charge a good price, and be courteous and set your machine where the farmer wants it, as you are working for the public. I drive my Ford to the job and when we get done there, the engineer and blower man moves the rig to the next place while



LeRoy W. Blaker's Engine 15 Fully Equipped, Including Electric Lights, Watson Governor and Travis Rocker Grates.

not. The Watson governor is the only good governor made with variable speed changer and automatic safety stop. With this governor I can run my engine from 140 revolutions a minute to 280 revolutions a minute under control of the governor and change the speed from the platform. Other governor ports are partly closed when you set them for slow running, and when you get in a hard pull you kill your engine, but with the Watson governor the speed changer is not connected with the valve stem at all. They are as strong on low as on high speed and by actual test are the most sensitive and closest regulating governor on the market.

I equipped my engine with the Travis rocker grates last spring and have run my engine eighty days with them, and they are absolutely as good as the day I put them in. Not a warp or sag in them. They are the grates for all kinds of coal and I think it was a good investment.

I received one dollar and eighty cents an hour for pulling an International ensilage cutter that belongs to a company of eighteen of my neighbors. I furnished the belt and

I settle up and then drive to the next place where the machine is to set and get everything ready when they come with the rig.

The elevator men say that the farmers bring in the cleanest grain from my machine.

I am going to join the Michigan Threshermen's Association as it is one of the greatest protections a thresherman can belong to.

Hudson, Mich. LEROY W. BLAKER.

Two years ago I did not know there was such a paper published as The American Thresherman and Farm Power. I was in need of a secondhand steam engine and a friend of mine told me that all kinds of machinery was advertised in your paper, so I subscribed for one year, and in the very first issue I got there was an 18-horse power engine advertised which I bought and used one season and then refused seven hundred dollars profit. I also have bought other machinery and saved money, besides all the good reading I have gotten out of the paper. I am sending in my renewal for another five years.

JACOB BERG.

Spades, Ind.

No sir-ee, bob!

No premiums with
Camels—all quality!

Camel

CIGARETTES

WHAT quality means to
your satisfaction, you'll
know as soon as you smoke

Camels! Camels quality plus Camels expert blend of choice Turkish and choice Domestic tobaccos pass out the most wonderful cigarette smoke you ever drew into your mouth.

And, the way to prove those statements is to compare Camels puff-by-puff with any cigarette in the world!

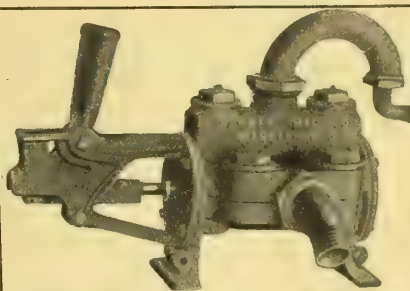
Camels have a mild mellowness that is new to you. Yet, that desirable "body" is *all there!* And, Camels never tire your taste.

Camels leave no unpleasant cigarettey aftertaste nor unpleasant cigarettey odor! Your say-so about Camels will be:

"My, but that's a
great cigarette".

Camels are sold everywhere in scientifically sealed packages of 20 cigarettes for 20 cents; or ten packages (200 cigarettes) in a glassine-paper-covered carton. We strongly recommend this carton for the home or office supply or when you travel.

R. J. Reynolds Tobacco Co.
Winston-Salem, N. C.



BARNES' Peerless Double Acting Tank Pump Is the Pump You Need

Because it will save you money from the first stroke of the handle. It pumps the water faster with less effort. The valves have separate caps and can be easily reached. This pump is built for hard service. It has been tested under all conditions and has always made good. It can also be furnished with plain head. We also manufacture the FAVORITE TANK PUMP. Write for circulars and prices.

The Barnes Manufacturing Co.
800 N. Main Street Mansfield, Ohio

Travis Rocker Grates

Order early.

All sizes in stock.

Quickly installed.

We have a rocker grate for YOU.

They prevent clinkers.

More steam with less labor will increase production.

They will accomplish wonders when using poor coal.

You require the very best of rocker grate service.

TRAVIS ROCKER GRATES are universally used by the thresher trade.

When ordering, give the length and width of fire box.

G. E. TRAVIS COMPANY, HENRY, ILL.



Makes Any Thresher Hum

HERE is a real gas power plant for a threshing outfit. Unlike the usual light gas tractor, it delivers a heavy reserve power—keeps the thresher running steadily—does not stall under extra heavy loads—insures keeping up the speed that means the best threshing results. Write and let us tell you about this machine, the

Nichols-Shepard Oil-Gas Tractor

—the result of 72 years' experience of a great organization building threshing machinery exclusively.

Almost every thresherman knows of the widespread success of Nichols-Shepard Steam Engines. This Oil-Gas Tractor has the same standard of construction. It is built with two cylinders, a strong main shaft and a heavy flywheel which stores the power to pull through those unexpected overloads. It has a strong, sturdy frame with enough weight to hold it in place. Burns kerosene and distillate.

It is also a good power plant for plowing and other heavy farm work.

Write for Circulars

Nichols & Shepard Co.

In Continuous Business Since 1848

Builders Exclusively of Red River Special threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines

Battle Creek, Mich.

What He Least Expected

By HOLWORTHY HALL

Copyright 1917 by Bobbs-Merrill Co

SHE strove to free her hands, but he relentlessly held them captive.

"Mr. Hollister—please—" "Has it got to be 'Mr. Hollister' still? After yesterday, and to-day—still 'Mr. Hollister'?"

"Please! Somebody'll see you!" Reluctantly, he freed her. The consciousness of his boldness appalled him; Ballin's cousin suddenly smiled and grew roseate.

"Now—Mr. Hollister," she said. "You've earned a—a sort of reward. Do you remember?"

He nodded in stupefied delight. "I remember." As though overcome by shyness at the realization, he added in what he meant to be a tone of sturdy conquest, and what was in reality a strained and feeble whisper: "Frances!" And then, because his vocal cords were quite intact, and because their vibration was marvelously loud, he said in what shouldn't have been an articulate voice at all: "You darling!"

For a moment his perceptions didn't record that there were two startled exclamations. He heard but one. His attention was riveted upon Ballin's cousin; it wasn't until he saw that her gaze was directed above his head that his cognoscence registered the second of the responses. Then he turned, and found himself under the battery of Miss Rexford's eyes. She was standing a dozen feet distant, midway between the table and the steps leading down from the street, blinking hard.

"Edith!" Miss Rexford's eyes filled with tears. There was no mistaking the fact; they were corporeal, saline tears, whatever their emotional origin; one of them, outstripping its fellows, ventured out upon her cheek. Miss Rexford's mouth worked pathetically. Miss Rexford snuffled. She looked at Hollister and at Ballin's cousin; and she took a step backward, and another; and she whirled about and stumbled blindly over the lawn, and up the wooden steps, and out through the Green Door itself to the highway.

Ballin's cousin transferred her mindfulness to Hollister. He was gloriously red, and shamefaced, and demoralized; and Ballin's cousin, beholding him, was smitten with that intuition which Kipling, the story-teller, adduces to prove that Judy O'Grady and the colonel's wife are both women. She *knew!* Or, rather, she thought she knew. Hollister was the one who had perfect knowledge; and through the chaos of his thoughts ran a verification of his belief that Miss Rexford was an accomplished tragedienne and farceur. She had staged it admirably, with the precise amount of repression to furnish verisimilitude. She had conveyed, without uttering a single word, an unmistakable impression of her wrongs, and of her rights. And Hollister sat tongue-tied, inept.

Ballin's cousin pushed back her chair, and rose.

"Mrs. Cloud! Frances!" he gasped. "No." Her voice was ineffably weary and discouraged. "I'm going back now. There's nothing to say, is there? Don't come with me, please. I want to be alone. I'm so tired of—explanations!"

Again—and it seemed for the thousandth time—Hollister had none to give. He sat in dumb dejection, until at length the waitress poked the reckoning under his napkin; and when he picked up his hat and went to the foot of the steps, he was still unaware that he had tipped Cinderella five shillings for serving five shillings' worth of tea. Small wonder she said politely that she hoped he would come again.

CHAPTER XXII.

"I hate these war liars," drawled Kirby irrelevantly.

Hollister, who was smoking in grim

contemplation of the foamy Boiler offshore, grunted, and continued to contemplate and to smoke.

"Man in the cafe," went on Kirby, burrowing with his elbows into the pinkish sand, "bragged he'd invented a patent camera to take positives instead of negatives, and develop 'em right inside the machine. Use 'em in aeroplane—and save time in scouting. Have you pictures of the evening's cooktent as soon as you land. Isn't that some stunt?"

"By all means," said Hollister absently. "He told me," narrated Kirby, "that the Kaiserly and Kingly government have him for the thereto rights fifty thousand mark ge-offered."

"Is that so?" muttered Hollister, removing his pipe from his mouth, and looking reproachfully at it, after which he enjoyed a brief period of strangulation.

"So I told him I'd invented an X-ray field-glass. When you look through it at the enemy you don't simply see where he is and what he's going to have for breakfast—you see what he's already had for dinner, and what the trade-mark is on his athletic underwear. And I told him the Kaiserly and Kingly government had me for the thereto rights a hundred-thousand mark ge-offered. And *Vermaledete Ungeschicklichkeit!* He didn't believe me!"

"Oh, absolutely!" said Hollister; and Kirby, glowering at him, made an uncannily close analysis of his thoughts.

"Phil!"

"Yes?"

"Look around here."

"Well?"

"Thou hast a sentimental cast of countenance, old dear. What irks thee? That yon orb of day seest her, and thou—thou seest her not?"

"Oh—nothing—more or less." Hollister squinted hard at the nearest Boiler and smoked furiously.

"And right speedily," said Kirby with malicious softness in his voice, "Sir Bohunkus smote Sir Holstein the Bull on helm and guerdon and greave and wrist, and all to brake his gonfalon—"

Hollister transfixed him with a flash of outraged dignity.

"Pete! Don't be such an idiot!"

"And Sir Holstein smote Sir Bohunkus betwixt helm and cuirass, and Sir Bohunkus smote Sir Holstein on the beard, and Sir Holstein died. And Sir Bohunkus doffed his plumed helm to the beauteous damsel—"

"Pete—shut up!"

"The beauteous damsel, the which had spied the combat from afar, and she was even as beauteous as he had fancied, yea, more so. She was enrobed in silken stuff, all enjeweled and en-garnished and enspotted and begirt and bebound and bebuggled—(the last idea is Stephen Leacock's)—and she was some swell chicken. And Sir Bohunkus—"

"Pete, get back out of the sun!"

"Sir Bohunkus spake to the damsel in words of one syllable, and said: 'I give thee good den, fair maid. Fear naught. I hight the Sieur Bohunkus, first cousin to the Margrave of Marguery, brother to the Czar and sister to the Czardine; Viscount Spearmint—'"

"Look here, Pete, if you think you're being funny—"

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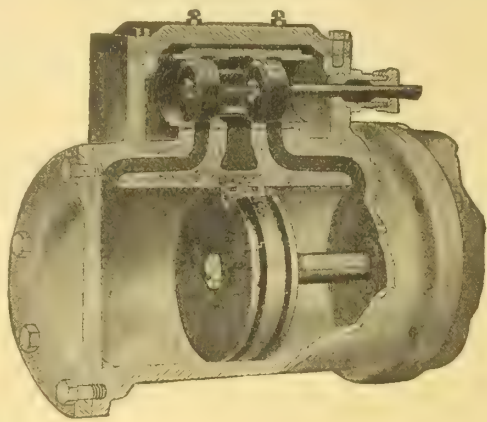
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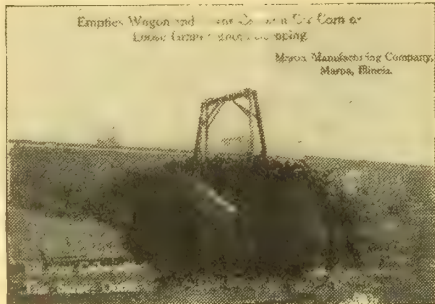
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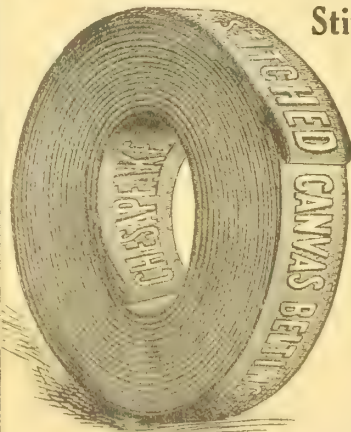
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"Pete, I'll slay you!"

"—And so forth, including the Scandinavian." And the damsel made obeisance, and said, "Oh, sir, thou wottest not of what thou hast done. And e'en hadst thou wotted—"

"Oh, choke yourself! Get it out of your system!"

"—Thou couldst have breasted thy spear no more nobly. I hight the Lady Nicotine, Marquise Corona, born of rich but honest parents, the same being Henery Clay and Hoyo de Monterrey—"

"Humph!"

"—Who dwell on yon castled steep at the sign of the United Cigar Store. My pet name is Lizzie the Lath. Father's got a Ford. Thou mayst kiss our hand. But Sir Bohunkus had higher aspirations, and—"

"Pete, if you want me to bounce one of these rocks off that receding forehead of yours—"

Kirby was righteously wrathful.

"All right, you unimaginative pirate," he said. "Here I've been trying to show keen insight into human nature—"

"You have!"

"Sure I have! When I saw that somewhere-else expression of yours, I spotted you cold—"

"Yes, you talked like it!"

"The Sieur Bohunkus," explained Kirby patiently, "is said by the scholiast to mean no less a personage than Philip W. Hollister—"

"Pete!"

"And the allegory, being interpreted, teaches us that ever man's a hero as long as he thinks about it. Come up with the truth, now—weren't you slaying dragons?"

Hollister snorted.

"No such slush as that!"

"Ah, but over it I threw the golden veil of romance and chivalry," said Kirby kindly. "For Bohunkus, read Hollister. For the Lady Nicotine, read—glug!" He was sputtering under a miniature sirocco, which had its rise not many inches distant, where Hollister's hands had busied themselves in the running of sundry tunnels, and the accumulation of much coarse sand. "That's a refined little trick!" he said indignantly, as he examined his glasses.

"Unless the subject is changed," stated Hollister, "you're going to find yourself in the mythical attitude of the well-known ostrich! Or—in your own style—Sir Bohunkus will all-to-brast your skinny neck for you!"

"And all I said was—"

"I heard you the first time!"

"All I wanted to say was—"

"You've said it!"

Kirby grimaced, and removed the final atom of isinglass from his tongue.

"Well, how are they coming?"

"How's what coming?"

"I crave benison, fair sir—"

"Venison?"

"Benison. And without fear of let or hindrance, I ask, prithee—how's things between you and Frances?"

"Meaning what?"

"Marry, fair sir—"

Hollister laughed helplessly.

"Pete, if you had as much judgment as you have nerve, you'd be another Napoleon!"

"I thank you for them kind words. But as an older and wiser man than you—"

"Who is?"

"I am referring to that prince of good fellows, P. Witherspoon Kirby. As an older and a wiser man, and one who knows well the wicked world, and its dangers and its bitternesses, I yearn to see you renounce your wild ways, and settle down to peace and quietude. And in New York you told me you were raving, tearing crazy about a certain beauteous damsel hight—"

"Lay off that 'hight' stuff, Pete! It's nauseating!"

"Well—yclept, then. Good old English expression—yclept. We gladly exchange all verbs if found unsatisfactory. A certain damsel yclept—"

"That's worse yet! Besides, I never said such a thing in my life!"

Kirby's face showed both sorrow and amazement.

"You didn't sit in the Harvard Club and tell me—"

"I didn't tell you anything!"

"Ouch!" said Kirby ruefully. "Well—that's something entirely different. I'd deluded myself into thinking you were human after all."

With the tip of his forefinger, Hol-

lister inscribed his initials in the sand. "You did, did you?"

"I did; and I rejoiced, gave thanks and sang."

"You can save a good deal of y time," said Hollister, "by cutting all that rejoicing. And don't bother to sing, either. You've got so much information that most of it isn't true."

Kirby laughed.

"I'd love to need money and sit a poker game with you, Phil. You'd spuffle worth a cent. Cheer up; Falstaff wasn't ashamed of himself."

"Pete, I'm out of the running—put up lame, and ruled off the track."

"Such language!" reproved Kirby. "Oh, my dear Duke, how you must have mispent your youth!"

"That's probably the reason why been thrust out into utter darkness."

"So soon? You're getting along mously. I hadn't any idea you'd that far! Good work, Margrave! kill another Saracen for her, and world is yours!"

Hollister refilled his pipe.

"Unfortunately you've got the wrong angle on it. Pete. I've just had pleasure of qualifying as a first-class small-caliber lemon."

"Really?" Kirby was serious, cheerful. "Well, far be it from me to advise a headstrong youth like you, if you've got yourself in wrong on account of any—er—any of the happenstance of the last couple of days—don't worry."

"Much obliged for the tip," said Hollister dryly. "I suppose you know all about it, don't you?"

"No—I'm giving you the latest bulletin. Diederick won't count for anything. And you'll be whitewashed as soon as he's up and around again. I just beat in a devious way that there's a you tornado rearing its horrid head in environs, so I thought I'd better let you know that it isn't nearly so bad as looks. And I'm one of the grand little weather forecasters south of Matuk Point!"

"Oh," said Hollister.

Kirby sprawled lazily at full length and appeared to be absorbed in study of a fugitive beetle.

"You don't have to spill any more than you want to, old dear—but I've been wondering what went on between you and Miss Rexford before we came? Has a good deal of bearing on the present. Mind you, if it's none of my business it's none of my business; but it might help calm the troubled waters if you just tell me in a general way how chummy you got with her."

Hollister hesitated.

"Pete, I do wish I could find somebody to match orders with me."

"Match what?"

"To swap even. I'm in a devil of a quagmire. I'm stuck with both feet and I can't see any way of getting out until either you or Ned comes through with the answer to some of these confounded drums. I'll come right out in the open if you will. Will you?"

"Let go their heads," evaded Kirby. "Release the fiery and untamed steed. Spring it."

"All right. You were with me at the Aspinwall when we put on that sket with Hartwell. I've told you what I did up on the *Devonian*; I've told you what I thought of Miss Rexford—and that was based on a little excursion that reminded me of The Woman of Sharnley. Then along comes Diederick, and there's more volley-firing. Now, I've deduced that you and Ned want me to hang around here—"

Kirby turned his head.

"Where'd you hear that?"

"It's been shouted from the housetops. And during the last week or two I got myself all balled up in your private affairs. In the mass it isn't very pleasant either. It's got me into some real hot water. I wouldn't let that bother me a lot if I saw any advantage in it for any of us. But in addition to everything else, I am in wrong with—one or two people. And I'm foot-loose again. So I've just about decided to come to show-down. If the pleasure of my company is worth anything to you, I'm afraid you'll have to write me a check. Pete. I'm foot-loose, but I'm broke. I'd love to loaf down here, but it costs money. So you can make out your budget, and if you'll lend me say two hundred, I'll be all right for six weeks anyway. Otherwise, if I can't be any use to you except as a brilliant conversationalist, I'd better start waded back to Broadway."

"I'll lend you anything you want, Phil."

"That is—on the grounds that it'll be worth while to you? That I won't be running up bills needlessly? I'm no plutocrat, Pete."

Kirby's smile was cherubic.

"Phil, it's time now to get together. That's why I asked you to wander over here with me. I'm going to disgorge. First off, I told you in New York that our distinguished fellow-townsmen and barrister thought he'd rather like to take his breakfasts from now to by-and-by with Frances, didn't I? And we admitted we knew he'd subsidized Miss Rexford for a sort of game-warden, didn't we? Fine! Now we also conceded that Jim had—well, Jim had a big, juicy, stuffed club that he could shake over the rest of us, and he jolly well shook it. We couldn't yip. He had us where there wasn't anything to do but pray for another flood. All we could do was to spar for time and listen for the going. Then you came dashing up to the Aspinwall, and we had a breathing space between rounds. Then you came trailing down here. That gave us another one. And Jim guessed you were his deadly rival, and he just naturally laid for you. Edith Rexford laid for it. And Jim wasn't clever enough, but it sort of looks as though Edith got you."

"There's no news in that, Pete." "Act Two," said Kirby. "Midnight at the Old Mill. Out of the cerulean firmament comes Diederick, who's Jim's law partner. He was supposed to be playing in New York; and he didn't throw away any loose change in cabling anybody that he was on the way down here. He just breezed in unannounced. He came up on the veranda that day after lunch, and Jim threw a fit. He talked a second to Jim; and he saw you going up-stairs, and he started after you. Jim caught him and they had words. They explained each other's pedigree; Diederick broke loose, and Jim bawled out something about you, and they both opened the cut-out—and the next scene was up in the hall. I guess you're a bit closer to that situation than I am—What's biting you?"

Hollister couldn't restrain his impatience.

"Cut out all that, Pete. Where do I fit in?"

Kirby frowned at the sand.

"You fit in because Jim is sort of half-way afraid of you."

"He is?"

"He certainly is. And while he is, he can't put the screws on the rest of us so hard. That's how you get your subsidy—if you need it."

"But, Pete! I haven't anything on Hartwell! I can't pry him off! What's the idea! Can't you be more explicit?"

"Not this afternoon, Phil. I'm only giving you an outline. But you can have all the free guesses you want."

"Confound it, Pete!" rasped Hollister. "I wish you'd stop making a Third Avenue sensation out of this party. Why in thunder should that potbellied lawyer be afraid of me?"

"Yet he was," said Kirby.

"And if I jumped to New York, he could exert influence of some sort to—to—compel—"

"He could have, and he would."

Hollister was able to reconcile this statement with one which Ballin's cousin had made; and for this small mercy he was very grateful. He didn't notice that Kirby had used a past tense.

"Then why did Mr. Cloud ask me to pull up stakes?"

"Did he do that? The old jackass!—shem! Why, if he did that, Phil, he must have gone off half-cocked. It certainly is a surprise to me!"

Hollister put away his pipe, and embraced his knees tenderly.

"I've been doing a lot of heavy thinking, Pete, and I've just about decided that the safest thing is to tell you the truth and ask you what I ought to do. Did you ever run across another New York lawyer—a man named Joshua W. Brown?"

"Oh, yes. He's a bear!"

"The job I've had," said Hollister "was with him; and—"

"I know that, Phil."

"The deuce you do!"

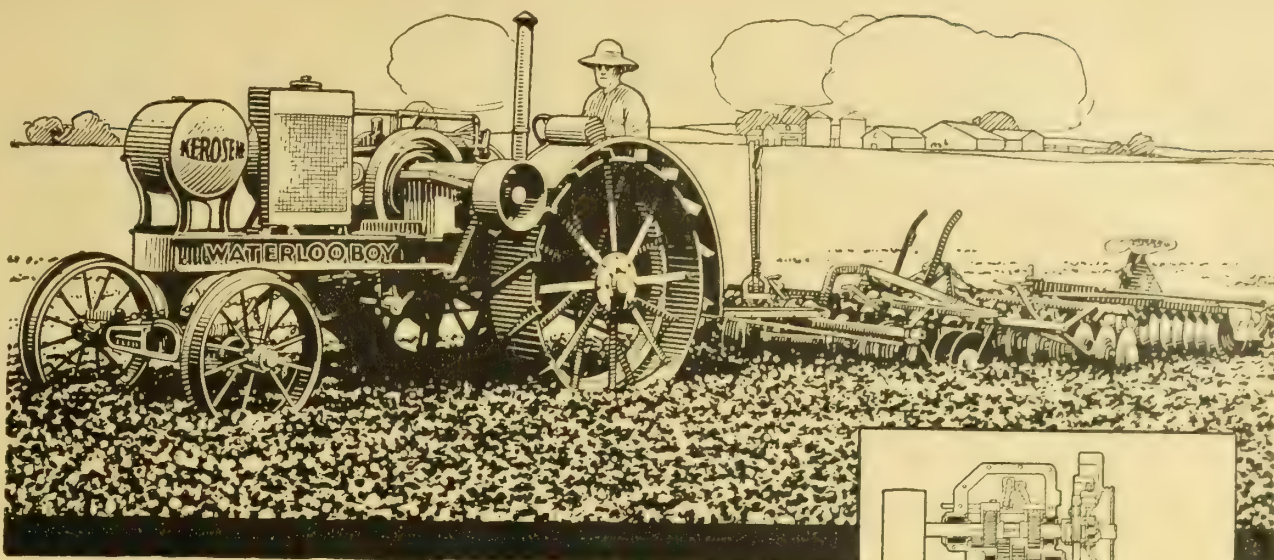
"My dear Duke, what do you think I hauled you to Elba for if it wasn't to chat about that job?"

"You—you've known that—all along?" spluttered Hollister, in awed amazement.

"Certainly I have!"

"And you let me flounder—"

"Old dear, I had to!"



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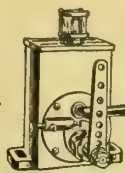
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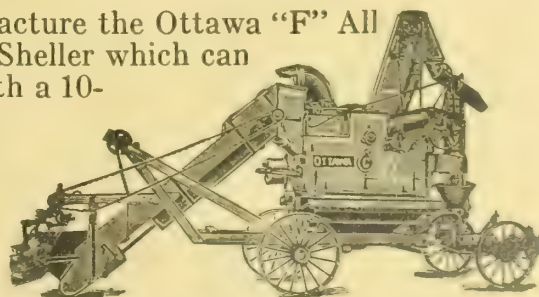
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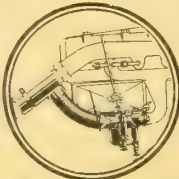
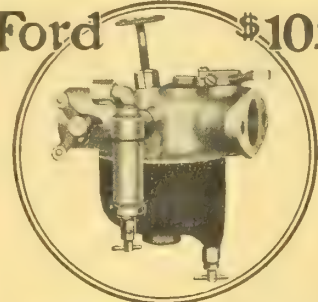
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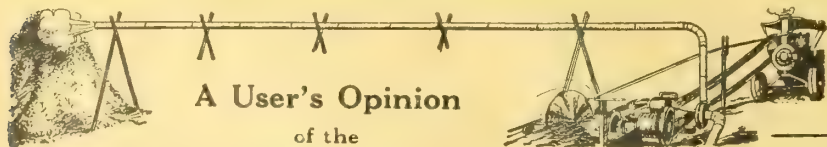
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"For more than a week I was fooled completely," said Hollister, open-eyed. "Honestly, Pete, I thought I had a job—a regular job. And then, of course, I saw how impossible it was, and cabled him that I'd quit. That was yesterday morning. I haven't heard from him yet. I've spent his money, and—"

"And at that you hung on two days longer than I thought you would. Incidentally, you needn't expect to hear from him, because you won't. You see Phil, the way things were breaking it was a cinch that Jim Hartwell would jump at conclusions and be scared to death of you. He'd have been justified in being afraid of any stranger who came in and joined us. And if you'd known what you do now, you never would have tackled Brown's job at all, would you?"

Hollister was thinking backward.

"Then all that palaver in the newspaper—"

"That was to reach out and grab you. You noticed it sounded like your biography in *Who's Who*."

Hollister's jaws closed with a snap. According to Ballin's cousin, Kirby had referred to Hollister's salary in a speech which hinted at priority of knowledge.

"Who was the principal, Pete? Who's been paying me? What for?"

"J. W. handled it like a master, didn't he? I understand he even had some ringers in his waiting-room to look like other applicants. Of course, everybody but you who actually answered that ad. got a polite letter to say the position was already filled."

"Don't beat around the bush, Pete! Who's the principal?"

"Jim was afraid of you because you're a better man than he is," said Kirby. "But now that Diederick's got into the game, he can pinch-hit you if you want a rest. It's certainly saved our skins for us—and we didn't expect it. So I really came out with you this morning, Phil, to sound you a bit and to tell you as much of the inside story as Ned'll let me, and to say that we did need you, and don't any more. I had a word with Diederick yesterday, very doggo, and that releases you. Of course I hope you'll stay with us of your own accord for the fun of the thing, and I'll hand you all the money you want. But as long as Diederick's here—"

"Who's the principal, Pete? Who's been paying my expenses—and why?"

Kirby suddenly raised himself on his elbows.

"Here he comes now, old dear! There's your principal. Ask him yourself!"

Hollister, turning, saw his friend Ballin hurrying down the last few steps of the long stairway from the heights. Ballin obviously had something on his mind—something weighty. He didn't salute the pair on the beach, he didn't acknowledge Hollister's long-distance greeting. He came swiftly toward them; and when he was eight or ten yards away, he said harshly: "Pete! I want you! Diederick—" He swallowed hard.

Kirby scrambled upright. His eyes were blazing.

"He hasn't taken it back, Ned! He hasn't lied to us! Not that!"

Ballin shook his head dejectedly.

"No—it's a lot worse than that! It's worse than ever, now. He's dead!"

CHAPTER XXIII.

As Hollister went wearily up the hotel veranda, its only occupant, a well-rounded gentleman in immaculate English flannels, rose from a wicker chair, and strolled unconcernedly north, so that he arrived simultaneously with Hollister at a point directly in front of the door. This gentleman was jovial and complacent; his mouth curved winningly, and his eyes sparkled. He seemed to be infected by a good joke, which he was bursting to impart to Hollister.

"Good afternoon," he began heartily. "Got a moment to spare me? I'll pay you."

"I wonder if it would," Hollister's tone was freighted with sincere doubt.

Mr. Hartwell permitted himself the luxury of open mirth.

"You know it would. Come, it's time you and I had a cozy little conference, and settled some of the problems of the universe."

"Do you think we can?"

"At least," said Hartwell, "we can debate. Or rather, I can narrate and you can confess—and confession, I've read, is good for the soul. Just let's sit in the shade over here, and go executive session. Shall we?"

Hollister had come so freshly from his

talk with Ballin and Kirby at El Beach that he was in no mood to refuse. He signified his acquiescence, and rang a chair along the barrister's.

"Before you go too far, Mr. Hartwell," he said, "you might as well realize that I know pretty well what you're going to say."

"Do you, indeed?" The lawyer's approval was palpably a mockery. "Are you fond of gambling, Mr. Hollister? Would you want to make a friendly little wager on it?"

"No."

Hartwell lifted his eyebrows.

"My dear young man, when you my age you'll take your defeats more philosophically—just as you'll take your victories. Just now, I'm calm in victory—don't you think we'll both save energy if you're calm in defeat? If I'm ever your place, I'll be."

"I'm not beaten yet," said Hollister stubbornly.

"Oh, but you are! You football players confuse courage with shame. I've seen men play until they couldn't stand, and had to be carried off the field. That's not courage. It takes genuine courage to admit a beating—and the man who's said not to know when he's licked, usually does know; but he doesn't dare to appear to others as though he hasn't the bravery to continue. He hasn't the true bravery—all he has is his husk. And if you're generous enough to look cold facts in the face, and you're courageous enough to quit at the proper time, you'll deserve great credit, and you'll live to fight another day. Now since you're so omniscient, what do you think I'm going to say next?"

"I'm going to let you do the talking, Mr. Hartwell."

"That's politic. Well, then—you've probably heard of the very sad and shocking death of my partner at the Cottage Hospital?"

"I have—yes."

"Did you hear of the curious document he drew up?"

"No."

"The beauty of it is," said the lawyer smoothly, "that it's not within the statute of deathbed statements. It's a peculiar document—very peculiar. Why, about two hours before he died, Mr. Diederick sent for Judge Tunbridge and a notary. He wanted to make an affidavit, and he wanted to make it in the presence of His Worship—you observe that his is a *nisi prius* court. It's a court of the first instance, that is. Possibly that's of less interest to you than it is to me. At any rate, Mr. Diederick swore that the assault committed upon him was not committed by me."

"Ah!" said Hollister, alert.

"His reason for making that oath was because he knew that certain individuals might have attempted out of spite to drag me into the case. I had followed him up-stairs. I had left him at the top, and gone to your room, and gone in—the door was unlocked—but there were no witnesses to prove it. He wished to relieve me from even the slightest embarrassment."

"I see," said Hollister slowly. His forehead was cold with perspiration.

"Furthermore, Mr. Diederick solemnly swore that the assault was not committed by you."

Hollister stiffened.

"What?"

"He had already denied by signs that you struck him, except in a previous altercation, but this time he desired to make his denial a matter of record. He stated that in truth and in fact, I was committed by a person or persons unknown to him; and that neither you nor myself was in the corridor at the time. He was unable to describe the person or those persons unknown. To the best of his knowledge and belief it was one person—a short, swarthy, native under the influence of liquor—and this imports, as you see, a motive of robbery. So that as far as you and I are involved, Mr. Hollister—although I never was actually mentioned except as a witness for the prosecution—the matter is ended." He beamed at Hollister, and preened himself like an overfed pouter-pigeon.

Hollister did his best not to seem startled by news which was, to the extent of his fear of publicity in establishing an alibi, really a tonic relief to him. He realized that Hartwell was merely teasing.

"That's illuminating," he said.

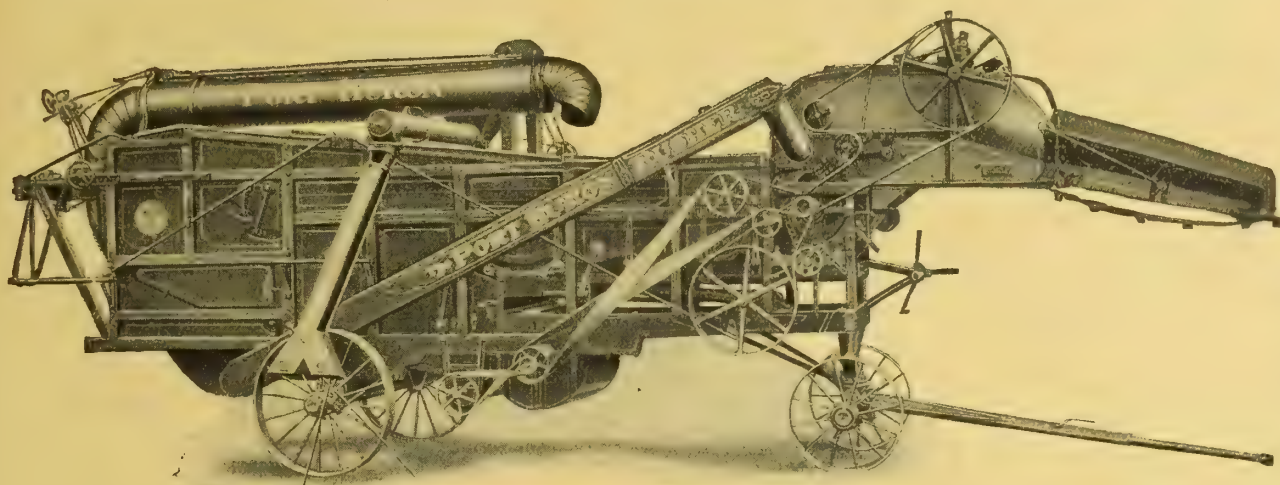
"Of course, I was moderately sure

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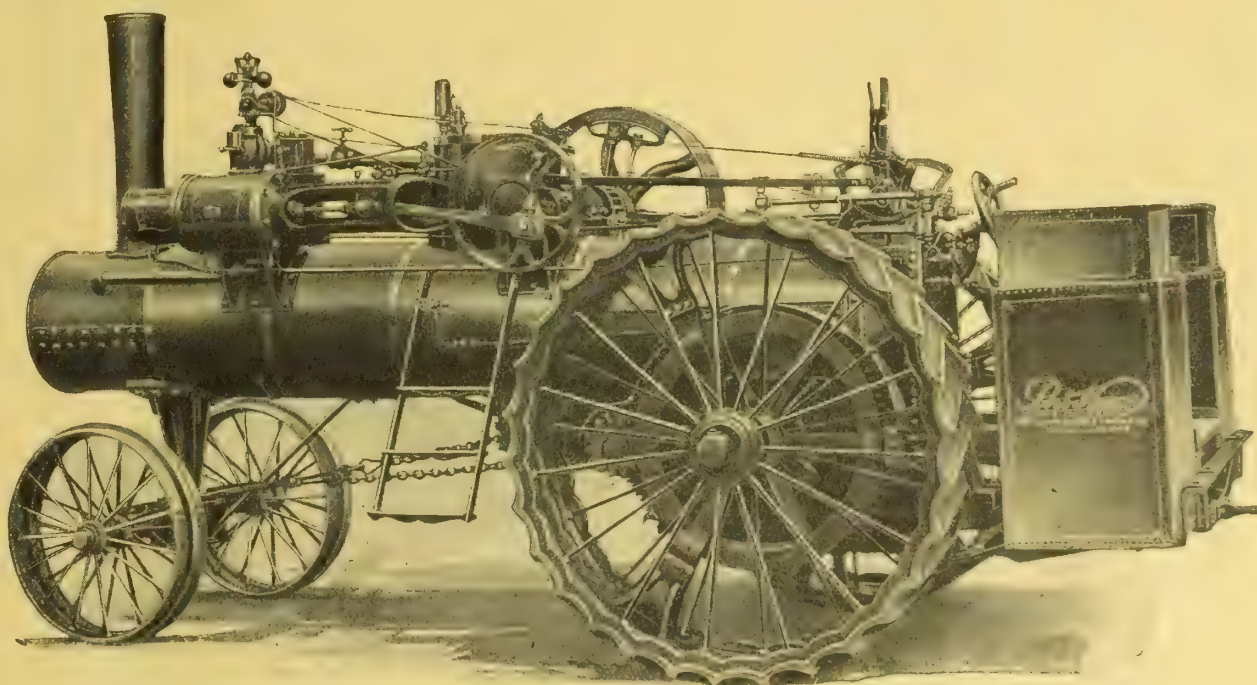


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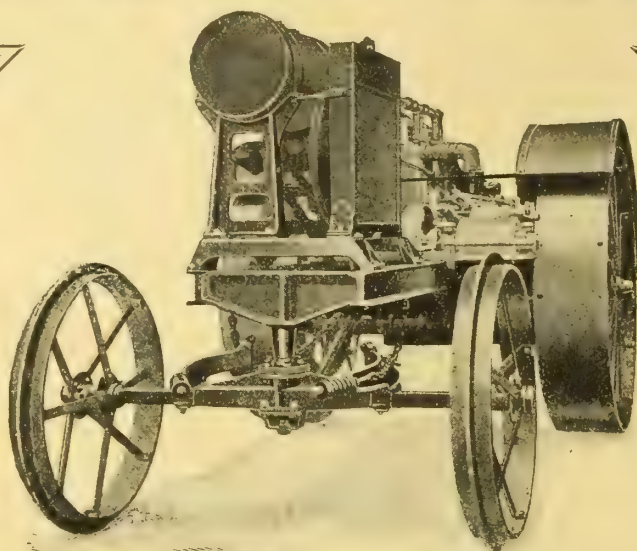
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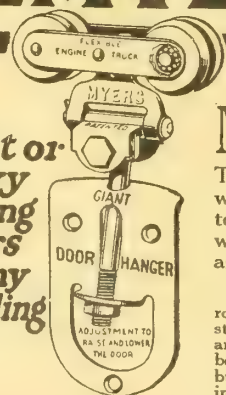
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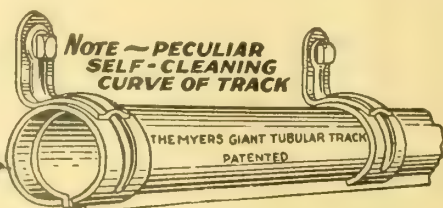
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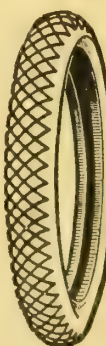
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that you hadn't injured poor Diederick—"

"You ought to be," said Hollister bitterly. The lawyer gestured excitedly.

"Oh, too sharp—much too sharp! The fates were against you, and moreover you'd publicly threatened to do something of the sort—but I was moderately sure—" His voice was studiously offensive. "I was moderately sure you lacked the initiative."

"It can be demonstrated," said Hollister, "whenever it's questioned."

The lawyer shook his finger playfully. "My dear young man, you're so young! It's only the most short-sighted of big game hunters who ever comes to blows. On pays too much for a very brief revenge. But we're wandering from the main topic. Mr. Diederick has exonerated you; and after the formality of another examination before His Worship, I think you'll find yourself free to go wherever you like. That brings me to the crux of this conversation. You may remember that at one time I offered you a considerable bonus to leave New York. The market has sagged heavily, Mr. Hollister. To be sure, I'm now suggesting that instead of leaving Manhattan, you go there, but this time there's no bonus. What's your suggestion?"

Hollister watched the course of the timid cyclist down the slope of Queen Street.

"I'm exclusively a listener, Mr. Hartwell."

"Oh, you prefer to have me elaborate? Charming, Mr. Hollister. You are, believe, a close friend—an extraordinarily close friend—of Ned Ballin. You satisfied me of that in the first interview I ever had with you. To a similar degree you are a friend of Peter Kirby. That I also learned and verified. To a lesser degree, you are a friend of Mr. Cloud. This much I have seen. Now there are fundamental reasons why your presence in Bermuda is distasteful to me. These reasons are, first, that you are a friend of Mr. Cloud; second, that you are a friend of Peter Kirby's; third, that you are a friend of Ned Ballin's. I'm very loath to say it, but you're about as welcome as a cop-bunker in the wrong place. You're a disturbing element. You're an unnatural hazard. You interfere with a natural trajectory. And because you haven't been able to separate friendship and business, I won't offer to buy your consent, as I did before. I'll reverse the proposition. I'll make you the same offer I'd make to any paid friend of this trio in the same contingency. Here it is: It won't cost you a sou to clear out."

Hollister grimaced sardonically. "Yes—I anticipated that sort of proposition. But suppose I still feel as I did when you opened negotiations once before? Suppose I don't choose to entertain it?"

The lawyer spanked his chair-arm with his palm.

"Don't trifle, Mr. Hollister. It isn't becoming."

"I'm not trifling."

"No? Remember, please, our good friend Diederick has passed away."

Hollister furrowed his brows. Ballin and Kirby hadn't told him what difference that made; although they had said much by implication. They had skated rapidly over current events, and utilized all their argumentative skill in persuading Hollister to stand by, so that he felt like a child's rubber ball on an elastic cord. It was the fourth change of sentiment with respect to his immediate domicile.

"That isn't significant, is it?"

"Significant!" Hartwell eyed him quizzically. "Why, my dear fellow—is it possible you're so innocent? You aren't bluffing again? Mr. Diederick, metaphorically speaking, was the only other cop-bunker on the links. Ask your friends what your present status is, Mr. Hollister. If you don't know, they'll soon tell you. Now let's get right down to Anglo-Saxon. I want you out of Bermuda—is that plain enough? I intend to see that you get out—is that plain enough? And if you don't get out by the next sailing—it'll cost your dearly beloved Ned Ballin somewhere between ten and twenty thousand dollars to start, and about a hundred and twenty-five to finish, or he won't dare to show his face east of the Alleghenies. It'll cost you your conscience for the rest of your life—because it'll send another of your friends to a nice gray apartment in a nice gray building where the bars

the windows weren't intended to shut out the mosquitoes. Go on back to your own crowd, Mr. Hollister! Ask Ned Ballin if I'm reciting any fairy story! And after he's convinced you—buy your transportation—and see the judge will you? He'll give you your *laissez-passer*—we've got an extradition treaty with these people."

Hollister sunk his nails into the palms of his hands, and kept a curb on his temper. He had to.

"Is that all?"
The lawyer laughed genially.
"Isn't that enough?"

"It's too much in one way—and not enough in another. When I need assistance in mapping out my itinerary, I'll go to Cook's bureau—"

"But, my dear young man, you forget that when you signed up with Ned Ballin, and when you embarked on the good ship *Devonian*, and when you watched the beautiful moonlight from fairyland—the wonderful, illusive moonlight—and when you materialized out of thin air to stand over Diederick in the corridor, you mapped out for yourself an itinerary which can't very well be altered at this late date."

"How do you mean?" demanded Hollister after a pause.

The lawyer stood up, and smiled paternally.

"Ask Ballin," he said. "Really, Mr. Hollister, I'm amazed at your slowness. You want axiom demonstrated. Well—see your friends once more. Perhaps they haven't been quite candid with you. And I'm making you a present of forty-eight hours. If you hurry, you can easily make your reservation. I think you'll find the staterooms on the promenade deck amidships the most comfortable. Will you have a cigar? No? Why so ungracious, Mr. Hollister? I'm not. You won't change your mind and have one?" His manner was condescending in the extreme. "Well—of all the people in the world! See who's coming!" Ballin and Kirby, who had preferred to walk rather than to ride back from Alba, were toiling up the grade to the Hamilton. Hartwell signaled to them. "Oh, gentlemen! Just a moment."

"Well?" snapped Ballin, coming to halt.

The lawyer, posing on the veranda, smiled down at him.

"Your Mr. Hollister doesn't comprehend why Mr. Diederick's untimely demise removes one impediment from our progress. Would you be kind enough to explain it to him?"

Ballin looked at Hartwell, and at Hollister.

"He's dormie, Phil," he said quietly. It's nearly all over but the shouting—early but not quite. I thought you understood that. Diederick had the goods on him!"

"See?" The lawyer was washing his hands with invisible soap. "Aren't we frank and outspoken, Mr. Hollister? Nothing hidden—nothing under cover. That's as it should be. Now—you sail, eh?"

Hollister caught his breath.

"When I get damned good and ready!" The lawyer fell back astounded.

"What! What's that you said?"

"I said I'd sail when I got damned good and ready—and not before! I'm sick of your methods! I'm sick of you! I'm going to do what I please, when I please, where I please! And if you think you can stop me, or if you think I'm square with you for that frame-up at the Aspinwall, you're mistaken! I'm going to do even things up—even! Do you get that—ou fat-headed idiot?"

"Touche!" gasped Kirby

Hartwell slowly regained his composure. He was still smiling, but with determination. His mouth had hardened and the glint in his eyes wasn't the glint of humor.

"Oh! That's it! Both of you heard that?"

"Jim," said Ballin hastily—"Jim! Take your time! He—"

"Take my time! Take my time! By God, I will—and it's now! Hollister—"

"Don't talk to me! I've nothing more to say to you!"

The lawyer licked his chops.

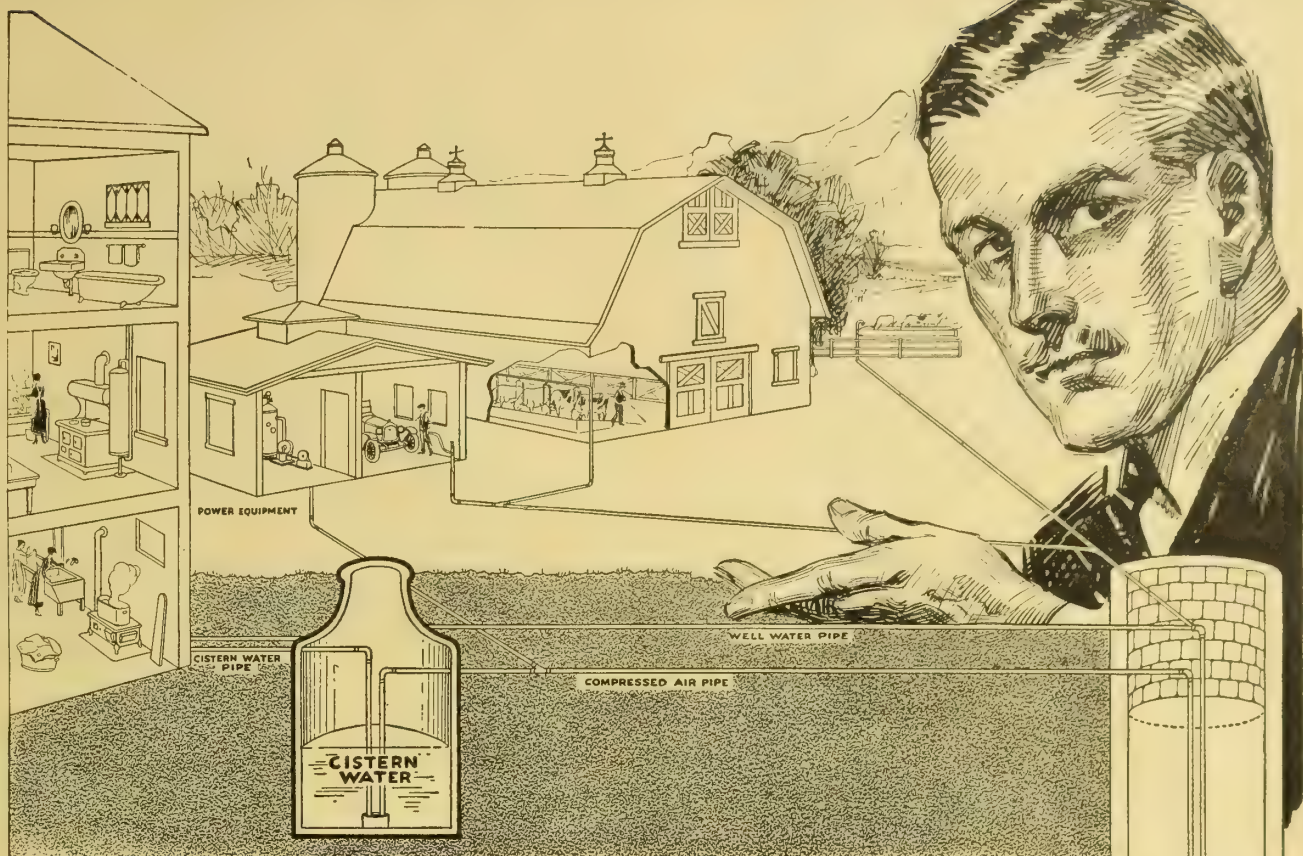
"Ballin—you've struck the rocks—now that?"

Ballin put out his hand to restrain him.

"Jim! You're running wild—"

"I'll run wilder before I'm through! This young buck is going to apologize—and get off this island—and you're going to guarantee it—or I'll cable the surrogate inside of three minutes!"

(To be continued.)



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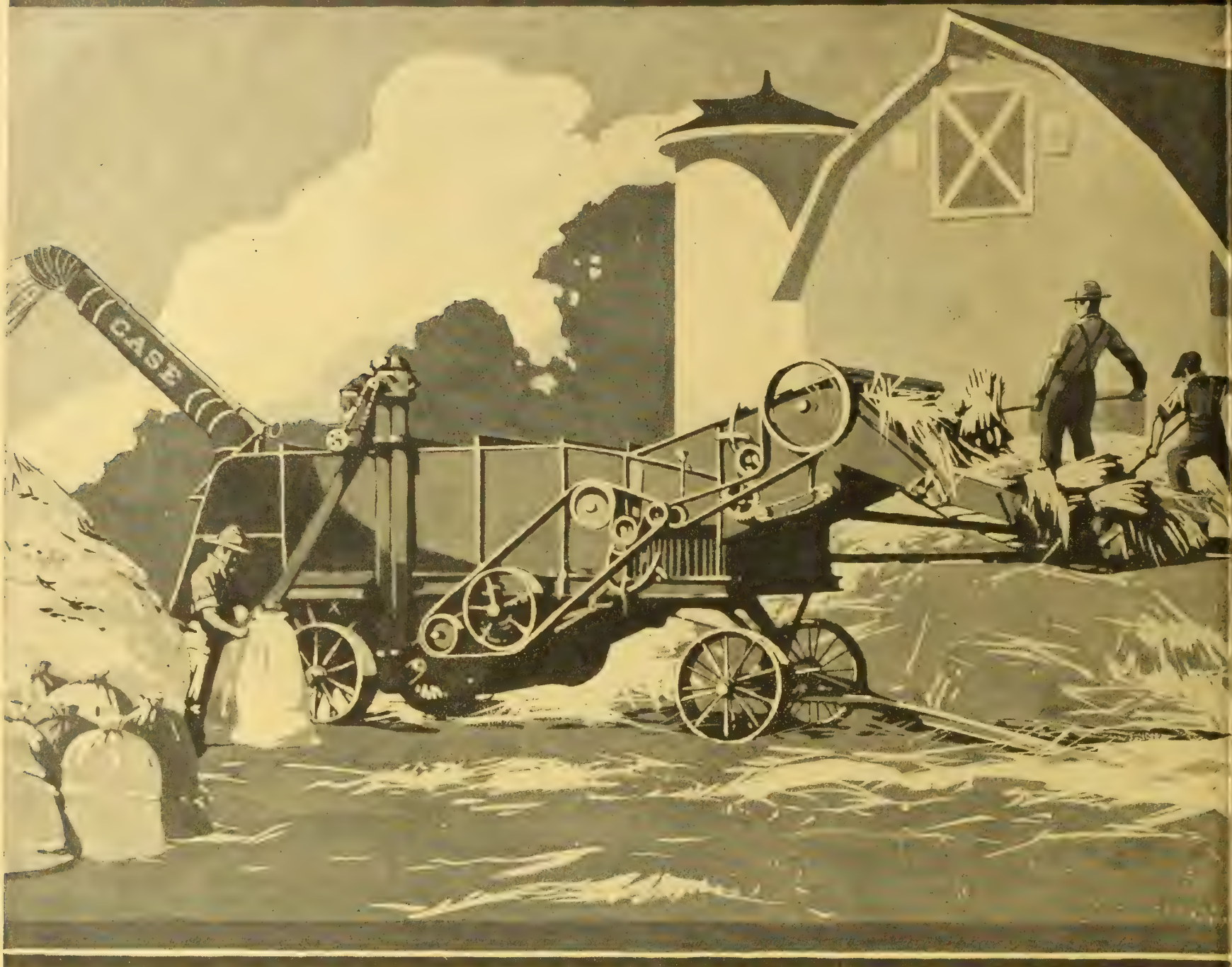
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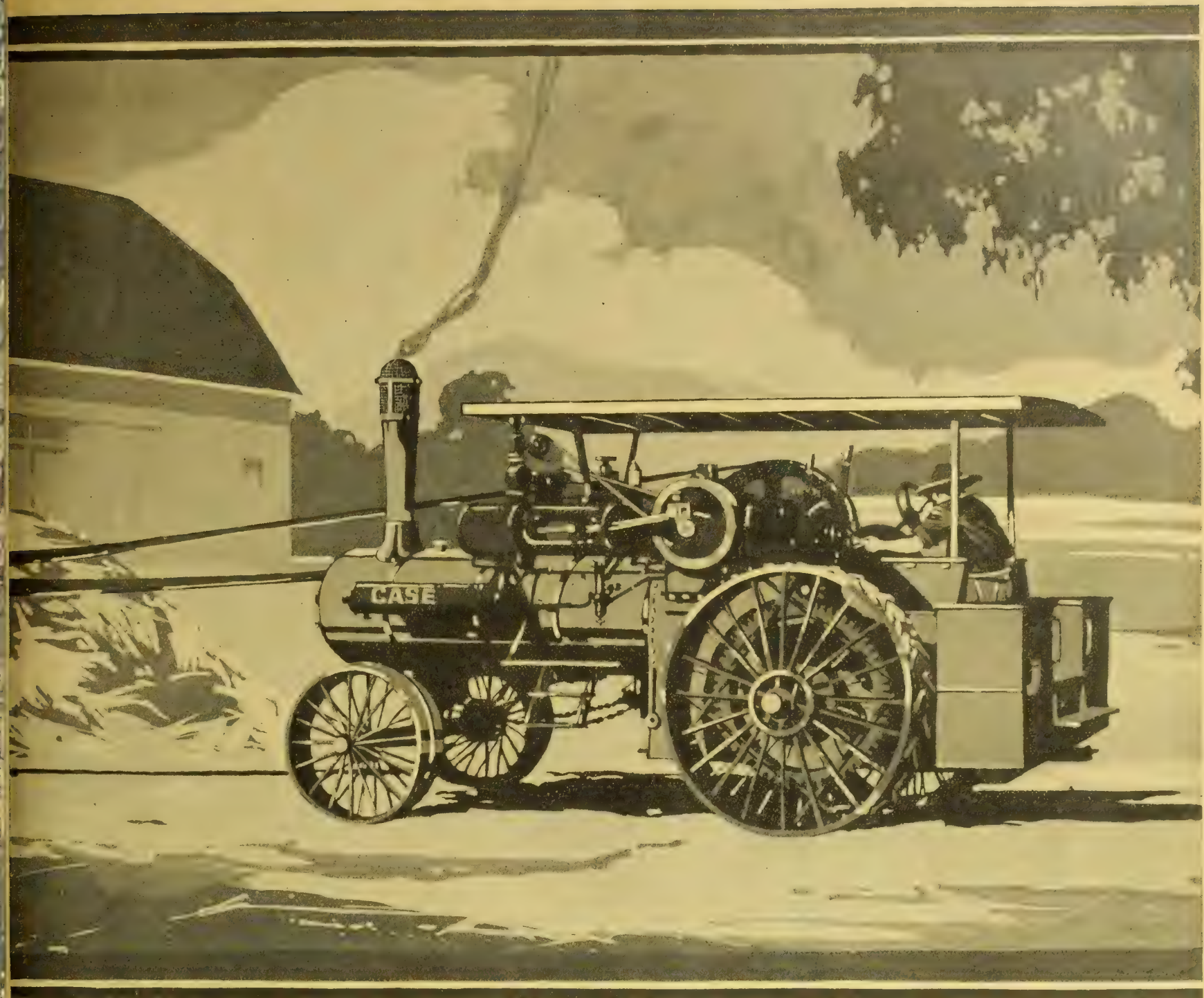


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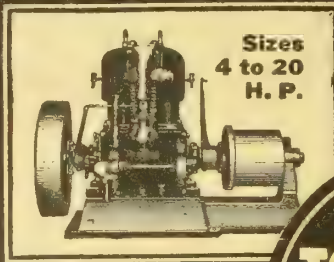


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Clean straw for 10c per acre. Surely it is worth that much and 3 days at that price pays for the Link Hood.

It is the only hood that cleans straw, builds better stacks and saves the chaff.

It is worth while to get our hood circular. Write for it today.

**Grain
Saving
Wind
Stacker**

Save Grain—We guarantee to save grain on your separator, any make or size, and clean a share of the dirt out of your straw or refund your money and you may keep the stacker.

Write us about it today.



Liberty Grain Blower

Let your engine or automobile elevate your grain and clean it at the same time. It raises the test. Takes out all mould, rust and grass seed.

Costs only about 1/3 as much as the old style—is easier to move and takes less space. Send for particulars.

LINK MANUFACTURING CO. KANSAS CITY, MO.

EVER TAKE A GAS TRACTOR COURSE? We have just released a dandy — 22 lessons of practical information to gas tractor operators. A postal request brings particulars. **Clarke School of Traction Engineering** Madison, Wisconsin

Boys and Girls

The Two Roads

BY ALICE VAN LEER CARRICK.

"Early to Bed and Early to Rise, Makes A Man Healthy, Wealthy and Wise."

Oh, the road to Healthy, Wealthy and Wise Runs by night through the Gates of Sleep. Straight over the Slumberland Beach it lies, Where Sandman gathers the sand for your eyes, That he shakes when the Sun has left the skies And the gray evening shadows creep.

But to reach this Land by the Road of Morn, You must rub the sand from your eyes, When you leave the Country of Drowsy Yawn, Just follow the path that the Sun has gone, And pass through the Gateway of Early Dawn Into Healthy, Wealthy and Wise.

Good Health Guards

If you had a treasure that was very, very precious, what would you do to keep it safe? Now there are a number of things you might do: you might lock it up tightly and carry the key with you always. But suppose the door that led to the place where your treasure was could not be locked, what then? You would have to put a guard to watch the door, wouldn't you?

Well, that is exactly what Mother Nature has done with one of your greatest treasures—your stomach. Now most little folks hardly know they have stomachs, so far as any trouble with them is concerned, and that is as it should be. But a lot of grown-ups have learned that stomachs are not only very precious, when in healthy condition, but are very, very troublesome, when some old disease gets the best of them. Many a time you will hear one of these grown-ups say:

"If I had known when I was a child how to take care of my stomach, I would be much more comfortable and happier now."

The trouble was, you see, this poor grown-up didn't properly guard his treasure, or perhaps I should say he didn't see that the guards Mother Nature had given him were kept well and fit to do their work. You know how careful Uncle Sam was to see that his soldier guards kept well. That was because he knew that only when they were well could they do good guard duty.

Now the guards to your treasure—your stomach, are your teeth. And your teeth, like Uncle Sam's guards, must have attention every day in order to keep fit for guard duty. A woman who has made a special study of how to keep your teeth well, says to remember to.

(1) Give them exercise by chewing your food thoroughly. Remember that your teeth "want" to stay in good condition, and they want us to help them. So let's remember not to swallow our food whole; because you know that you never did hear of a stomach that had teeth. You can make the teeth in your mouth happy by giving them some hard work—and do you know that they just love to

chew on something hard? So don't throw away the crusts. Just remember that your teeth need the exercise. You like to have someone else give you things you like; so remember to think about pleasing your teeth.

When we swallow our food whole we get a "regular big tummy-ache"—and big folks call it "indigestion." We also get constipated from having bad teeth.

(2) After exercising, your teeth feel just like your hands after you play ball or jacks—just as though they must have a good cleaning. So let's get our tooth brush!

Now, let's use it real good. Get at the surface of the teeth, inside, outside, and grinding surfaces. Be sure that you bring your tooth brush well up on the gums—and this is easy to remember: "Brush the teeth up stairs down; and the teeth down stairs up."

(3) Children, these things are bad for your teeth; as decay starts in quickly after eating them: Candy cake and crackers.

Yes, I hear some little boy or girl say, when they read this: "Oh, but those are all the good EATS." Well, if you must eat them, do it when you know that you can brush your teeth right afterward.

(4) Remember that it pays to go to the family dentist every six months to have your teeth examined. It has been figured out that it costs as much to fix up the teeth of a child thirteen or fourteen who has never been to a dentist as the cost of keeping clean and in repair the teeth of an entire family who go to the dentist every six months.

Now, let's all join hands and remember that we want our United States to have the healthiest boys and girls in the world—and that means work. Because, children, good teeth are like everything else good in this world; we have to work for them.

From Our Boys and Girls

DEAR AUNT JANE:

I am a farmer girl thirteen years old. I go to school every day. I am in the eighth grade. Papa takes The American Thresherman and Farm Power and I enjoy reading the Children's Page. We have one hundred and seventy-five little chickens. I have thirty of my own. For pets I have a dog named Beave and two kittens named Tabby and Bobby. We have an Overland Car also a Ford. I have four brothers. Their names are Willis, Frank, Walter, and John. I also have three sisters. Their names are Bessie, Margaret, and Hazel. Frank is married and has one little girl named

a. Bessie is also married and has the little girl named Erma and a baby boy named Emmitt. Walter was in the army for one year. He was "over there" for seven months. He is now at home. I wish some of the cousins would write to me and I will answer any letter or card.

Your niece,

Edna M. Cooper.

Slippery Rock, Pa.

(Suppose you write first to some other cousin, Edna.—Aunt Jane.)

DEAR AUNT JANE:

My uncle takes The American Thresherman and Farm Power. I enjoy reading the Children's Page very much. I am twelve years old and am in the seventh grade at school. My teacher's name is Barbara Rue. My uncle has a gas engine and an Admiral hay press,



The Best of Friends.

This is a picture of Alice Nollman and her dog, "Queen," who are the very best of friends. "Queen" thinks that everything little Alice does is all right, even when she sits on him! They live in East Alton, Illinois.

I also have a five passenger Saxon car. I live on a farm of two hundred acres. My papa has a five passenger Maxwell car. I have two brothers and no sisters. My brothers' names are Garlan and George. Garlan goes to school and is in the fourth grade. This is my first letter and I hope to see it in print. Your niece,

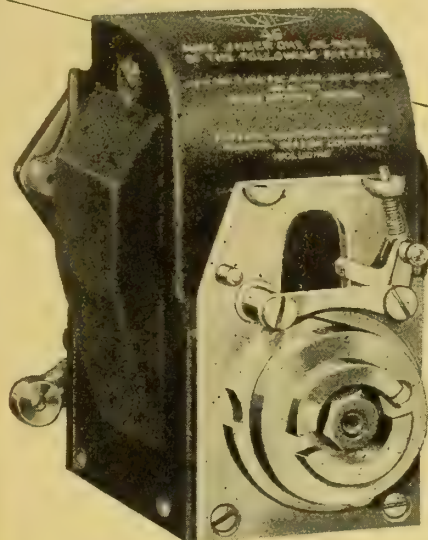
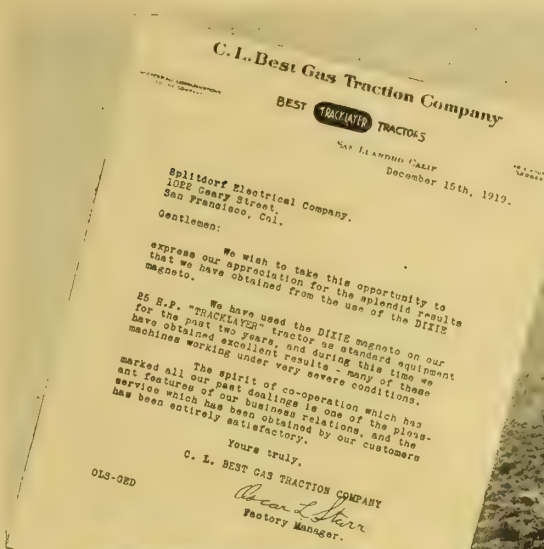
JOSEPHINE WELTON.

Dubois, Ind.

(Here is the hoped-for letter, Josephine.—Aunt Jane.)

DEAR AUNT JANE:

May I join your circle? I am a little boy nine years old and am in the fifth grade at school. Papa takes The American Thresherman and Farm Power. Papa has an Advance-Rumely threshing machine. Papa has twenty-three horses and eleven



DIXIE Magneto with Impulse Starter



Best Tracklayer Tractor, pulling three-bottom Oliver gang plow

Dixie

ALWAYS DEPENDABLE

gives excellent results under severe conditions on the BEST TRACKLAYER.

The "Tracklayer" is operated under extremely difficult conditions and must encounter every adverse working situation that could possibly test the efficiency of an ignition system.

That the Splitdorf DIXIE Magneto lived up to its "always dependable" reputation under such conditions is fully attested by that part of the manufacturer's letter which says: "As standard equipment for the past two years, we have obtained excellent results—many of the machines working under very severe conditions."

The fact that the DIXIE is now regular equipment on more than one hundred of the country's well-known tractors suggests the importance of having the dependability that DIXIE insures for your tractor, your truck, your car or your farm engine.

SPLITDORF ELECTRICAL CO., Newark, N. J.
Sumter Division: 1466 Michigan Ave., Chicago



Your dealer can supply you with type best suited to your automobile, truck or farm engine. Our booklet will tell you exactly the right type for YOUR engine. Write for it TODAY.

head of cows. We have had many rains here. Your nephew,

JOHN WATKINS.

Hobart, Okla.

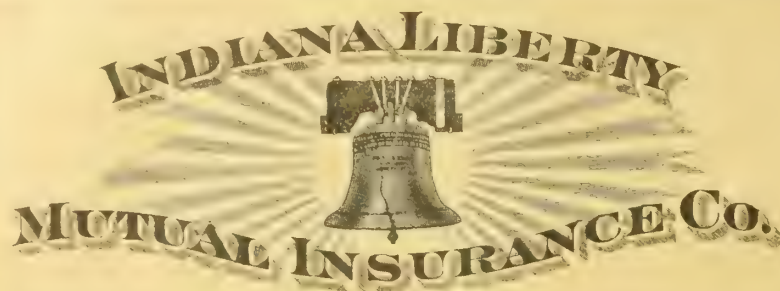
(Many rains, if not too many, should mean fine crops, John.—Aunt Jane.)

DEAR AUNT JANE:

I have never written to the Children's Department before. I like to read the Children's Page every month. My papa takes The American Thresherman and Farm Power and likes it very much. My papa owns two Waterloo Boy tractors

and a Ford car. My uncle Ray runs one of the tractors. I have not seen any letters from Wyoming for a long time and so thought I would write one to you. I have two brothers and five sisters. My brothers are named Lyle and Earl. My sisters are named Irene, May, Iva, Nermie and Mildred. Mildred is about five months old. She is the nicest little baby I ever saw. Lyle likes to help in the field. He is twelve years old. I like to help mamma. I make lots of cake and pie for her and take care of the baby. This is the way I like to play with

Nermie and Mildred. I put them both in the baby buggy and wheel them awhile then I run and hide. Nermie comes and finds me and when she has found me she runs and tries to get in the buggy before I get there. We have lots of fun and Mildred enjoys it, too. For pets we children have seven kittens and four older cats, a dog, and we girls have a donkey and the boys have a horse. I am thirteen years old and I am going to be in the seventh grade next year. I have always had the same teacher and always gone to a country school, but want to go to



You Can Be Proud of This Name on Your Compensation Insurance Policy

What Other Name Would Mean That Profits Are Returned To You?

Many states compel threshermen to operate under the Workmen's Compensation Law, while others leave it optional whether they operate under the Workmen's Compensation Law or Common Law. The amount of their liability to employees is reduced by operating under the Workmen's Compensation Act. No law suit with big court cost and attorney fees to pay. The law in many states makes the farmer pay for injuries to a thresherman's employe, if the thresherman is not financially able.

Protect your customers. Provide compensation to disabled employees. Operate under the Workmen's Compensation Act and insure in a good Mutual Insurance Company that returns to you the profits. Our company will do all this for you. Here's why you should insure in the Indiana Liberty Mutual Insurance Company.

It has \$10 for each dollar it actually owes.

Its organization has saved its thresher policy holders approximately \$350,000 with an average of approximately \$70 per year per policy.

It has the official endorsement of the Threshermen Brotherhoods of Indiana, Illinois and Kentucky.

It has loss reserves as required by law of more than \$35,000 with approximately \$10,000 of losses to pay.

Illinois Threshermen may write to Davidson & Boyer, 112 South Main Street, Decatur, Illinois, for information.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY
624-25 OCCIDENTAL BUILDING
INDIANAPOLIS, IND.

Mention The American Thresherman and Farm Power



Limestone Pulverizers

Sold direct from
Factory to Farmer
Write for catalog
O. B. Wise Pulverizer Co.
Knoxville, Tenn.

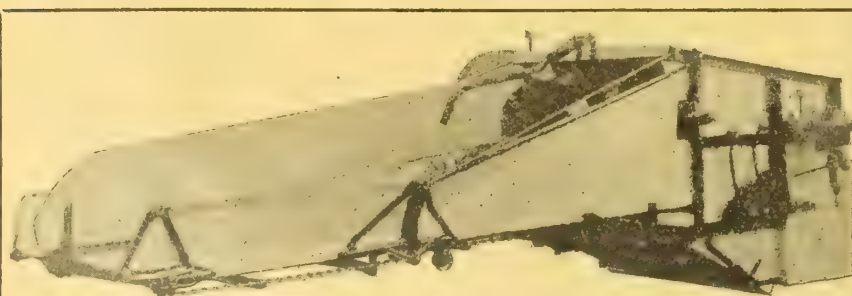
Mention The American Thresherman and Farm Power

Now Ready!

A Complete Course in Gas
Tractor Engineering by
Correspondence

A postal will bring full particulars and a complete outline of the course.

Clarke School of Traction Engineering
Madison, Wis.



All Trigger Work Cut Out The Kirby NEWWAY Feeder

This wonderful feeder handles every kind of grain in every kind of condition with less slugging, less power, less vibration, less upkeep cost and more perfect delivery to the cylinder than any other.

**No Retarder—No Fragile Stuffer
Jaws—No Flat Crankshafts**

Scientifically simple arrangement of four-foot, completely revolving cutter bars delivers grain to top of cylinder completely loosened. The double crankshafts make this possible—found in no other feeder.

The NEWWAY does everything you want your feeder to do and has absolutely none of the trigger work that always gives you trouble. It is 100% stronger than others.

All Steel—Has Stood All Tests—No Experiment

Write immediately to the makers for the full facts and find out what others have done with it. Don't delay and be too late. Be the lucky man in your locality.

SOUTHWEST MFG. CO., Oklahoma City, Okla.

town school next year. We live on a farm of five hundred and fifty-three acres. I will send some riddles. A man went across a bridge on Friday and came back on Friday, yet he did not come back the same day. (The horse's name was Friday.) Flour of England, fruit of Spain met together in a shower of rain, put in a bag tied around with a string. If you tell me this riddle I will give you a ring. (A Plum Pudding.) I will send the cousins a candy receipt. Two cups of sugar and one-half cup of water. Boil until it strings, then add one half cup of milk and cream mixed; if you do not have cream, mix in a chunk of butter. Boil until it strings twice, once in water and once in milk. Move from stove and beat until stiff. If you have nuts you can put them in when you move from the stove before you begin to beat it. It is awfully good and you can eat all you want and it won't hurt you. I will close for this time.

Your niece,

VERA PEARL SISSON.

Pine Bluffs, Wyo.

(Thank you for your nice letter, Vera. Can't you send us a picture of Nermie and Mildred for our Department?—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a girl eleven years old. I am in the sixth grade at school. My teacher's name is Miss Gascho. I like her very much. This is my first letter to you. My papa takes The American Thresherman and Farm Power. My papa has a threshing outfit. For pets I have two dogs, whose names are Buster and Teddie, one calf, named Rosy and one horse, named Babe. I have one sister and one brother. Their names are Alice and Elmer. Alice is three years old and Elmer is twelve years old. Here are some riddles: There is a man who has a dime and a penny. He dropped the penny? Why didn't the dime drop? If two and one is shoe polish, three and one is stove polish. What is four and one?

East Alton, Ill. LAURA NOLLMAN.

(You will find Alice's picture this month, Laura. Thank you for sending it.—Aunt Jane.)

DEAR AUNT JANE:

I thought I would write to you, as I never saw any letters from Delaware. I am a little girl eight years old. I have light brown, curly hair and blue eyes. My birthday is the fifth of September. I go to school nearly every day, and I am in the third grade. I like my teacher. Her name is Miss Isadora Bradley. My brother takes The American Thresherman and Farm Power. I like to read the Children's Page very much. I live on a farm of one hundred and forty acres. We have a Mogul 8-16-horse power kerosene engine,

and a silo cutter. We also have a Nateo silo. We have two mules and five cows. My father has a large seven passenger Everitt car. My brother has a motorcycle. I have four brothers and three sisters. Their names are Charles, Francis, William, Russell, Anna, Corintha and Bessie. My brother Charles was in the A. E. F. in France and is home now. I wish you and your boys and girls could see what he brought home. We raise pigs, chickens, ducks, geese, turkeys and guineas. For pets I have a dog named Sam. I guess I will close for this time. Hoping to see my letter in print, I am,

Your niece,

JESSIE WOODROW BROWN.

Porter, Dela.

(Write again, Jessie, and tell us what the soldier brought home. —AUNT JANE.)

DEAR AUNT JANE:

I am a little boy eight years old. I am in the second grade. I have one sister and one brother. Their names are Laura and Paul and they are both younger than I. We have lots of fun sleigh riding and snow balling in the winter, but I am glad spring is coming for then I can help papa in the fields. We live on a farm of one hundred and fifty-seven acres and we have a gasoline engine and an Overland automobile. My papa takes the American Thresherman and Farm Power and I like to read the Children's Page. For pets we have one dog and two kitties. Our dog's name is Sandy but he isn't as cross as his name sounds. I have a little engine three feet long and two feet high and I like it best of all my toys. I am going to be an engineer when I get big. My papa has run a threshing outfit for fifteen years, and he is going to buy us one when I get big enough to help him. I will close now, hoping to see my letter in print, as I want to surprise my papa with it.

Your nephew,

AMOS POST.

Lewiston, Ill.

(You wrote a nice letter, Amos; I am sure papa will be pleased with the "surprise."—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl twelve years old and am in the sixth grade at school. For a pet I have a guinea pig and a cat. I have not named them yet. I have three sisters and three brothers. Their names are Minnie, Kathryn, George, Grace, John and Henry. George, Minnie and Kathryn are married now. I have two dolls. Their names are Dorothy and Mary. We have a Case car. My birthday is the twenty-sixth of December. Your niece,

Knox, Ind. GENEVA MEINEKA.

(You came very near a Christmas Day birthday, didn't you, Geneva? —AUNT JANE.)

Organizational Notes

(Continued from page 20.)

ons extended an invitation to him to attend their convention next year.

The Illinois Brotherhood extended meetings to the Kansas Threshermen Association and School as follows:

"We wish you abundant success, and may your organization prosper and succeed until it embraces all your great state. We are enjoying the most successful meeting in our history, and the success of our fire Insurance Company is assured."

Mr. Higgins, secretary of the Indiana Liability Mutual Insurance Company, was called to answer inquiries in liability insurance.

The Wednesday evening session was given over to the branch managers and salesmen, to put on one of their well known and highly prized entertainments, beginning with a banquet, and ending with a show at the Orpheum.

A motion was passed providing that we recommend to all of our members the Indiana Liability Mutual Insurance Company as a reliable company in which to carry liability insurance, and recognizing this company as the official company of the Illinois Brotherhood of Threshermen.

Reports of the secretary and treasurer of the Illinois Brotherhood of Threshermen were read and approved. The receipts for the year 1919 was shown to be \$2193.25; balance from 1918, \$494.94; money in the hands of the secretary March 1, 1920, \$78.27; total orders issued, \$2085.87; February 1, balance, \$680.59.

After the report of the secretary, the constitution and by laws of the Illinois Brotherhood were adopted.

The following officers were installed: President, T. I. Davidson, La Platte; vice president, J. H. Brinkman, Gibson City; secretary, J. M. Boyer, Decatur; treasurer, Frank Lowery, Bardolph.

The meeting adjourned to meet at the Auditorium, Peoria, Illinois, March 1, 2, and 3, 1921.

J. M. BOYER, Secretary.

Lima Meeting

It was too bad that the weather had to be so nice that many of the boys could not get to the Lima District Meeting, held at Lima on Wednesday, May 19.

The program was a very fine one, and those who did attend went away well satisfied with the information gained by attending this meeting. Some of the best talent had been engaged by the committee in charge, and the program was high class in the extreme.

Owing to the very backward weather which had delayed the sowing of the crops, most of the threshermen and farmers in Allen County were very busy planting corn and could not get away from their work, so that the attendance was not what the program would warrant.

(Continued on page 62.)



You Can Get at the K-W. The only parts that ever need attention on a K-W Magneto are the cut breaker (B) and distributor (A). Both are on the outside where you can get at them, take them off clean them or adjust them right in the field.

One Big Fact About Tractors

THERE are many features to consider in buying a tractor, but here is the **one big fact**, that is too often overlooked.

Every gas tractor—no matter what the design—gets its power by the rapid burning or exploding of gas in a cylinder.

Once that power is produced it may be harnessed and applied through any one of a dozen different designs. But unless the gas is exploded quickly and completely—unless it puts its full punch behind the piston at exactly the proper instant all the designing in the world cannot make the tractor efficient.

The magneto turns fuel into power—the tractor is the means of applying this power to farm uses. **GET THAT FACT.**

Tractor engineers who have had years of experience always appreciate this fact. This is why most standard makes of tractors are K-W equipped.

Buy a Tractor with a K-W Magneto.



THE K-W IGNITION CO.
2837 Chester Ave. CLEVELAND, OHIO, U.S.A.

Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop.

Stack the Straw

It's easy with a Finnigan Stacker Hood. No blast to interfere with the work on the stack, therefore a perfect stack. Pays for itself every day it is used. Easily and quickly attached. Built for all sizes of separators. Sold on trial. Write now to



The Finnigan Mfg. Company
Anamosa Iowa

Study at Home! Learn Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address
Clarke School of Traction Engineering - - - Madison, Wis.

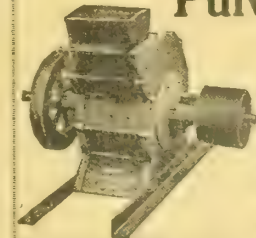
Acetylene Headlights for Traction Engines



Complete in one apparatus. The best on the market. Indispensable for plowing at night or moving over rough fields and bad roads. Attachments for all makes of engines. Projects a light 400 feet. Will not jar out. Runs ten hours with one charge. Write for catalog.

Agents wanted American Acetylene Stove Co., 512 Masonic Temple, Minneapolis, Minn

Limestone Pulverizers



More capacity
Less power
Cost less
Last longer
Than others

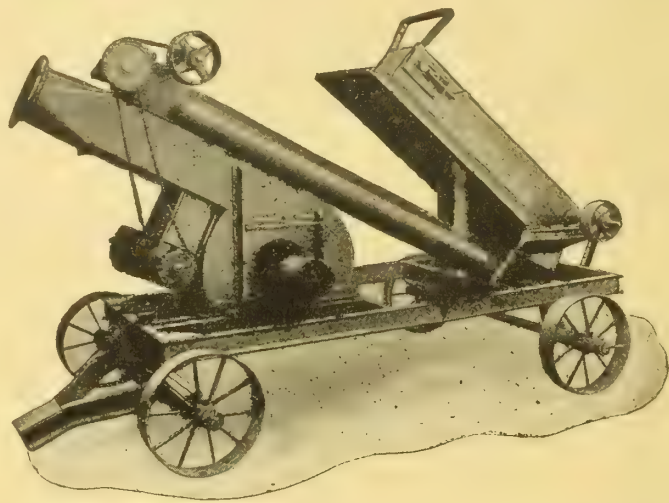
Lime your land—make money—your neighbor's land. We have the right system.

Day Pulverizer Co. Knoxville, Tenn.

Here is the machine
you've been looking
for—the

Bernert

Portable Grain
Blower and Conditioner



The Great Labor Saver and Grain Improver

The machine that will not only fill the farmer's grain tank, but that will also put his grain in cars without any scooping.

Handles Grain Direct from Wagon

The blower is equipped with tiltable wagon hopper; no backing to be done in order to place the load in position for dumping.

The grain blower not only handles the grain, but at the same time cleans the grain from chaff, dirt, smut, etc., in addition to absorbing the outside moisture of damp and wet grain. This will give the grain a better grade and make it better fit for the storage and the market.

No cracked or bruised grain. All grain is fed into the air current ahead of the fan. Positively non-chokable, the Bernert Grain Blower is the only blower system that will not choke, regardless of irregular engine power or the slipping of the drive belt, at the same time giving protection to the fan if foreign material such as a stone or piece of iron should be fed in with the grain.

You cannot afford to wait and be any longer without this machine.

See your implement dealer at once and if he cannot supply your wants, write immediately for descriptive matter to the

BERNERT MFG. CO., Milwaukee, Wis.

You can solve most of your belt problems by lagging your machine and engine pulleys the new way—with

Washington Superior Pulley Covering

Without the use of rivets or removing pulley from shaft. Then you can run your belts slack without burning them out and get more contact on the pulley, thus greatly increase your output and lengthen the life of your belts and machines. Threshermen have used this pulley covering for sixteen years on both engine and machine pulleys, because it gives better results than a leather lagging, wears longer and costs less. It is supplied in outfits of a special glue and canvas, with brushes, scraper and plain directions for use. Write for sample and prices today.

W. S. Raymond, Manufacturer, 708 Chicago Road, Niles, Mich.



Parson Dickson's Sermon

IN de fust vuhse ob de sixteenth chaptah ob de Rebelation ob St. John yo' will find dese wuhds: "An' I heard a great voice out ob de temple sayin' to de seben angels, Go youh ways, an' pouh out de vials ob de wrath ob God upon de uth."

When yo' looks up into de heabens an' beholds de wondahs ob God, how He has done created wuhlds laik de countless sands upon de sea shoah an' set dem all in space so dat one does not conflict wid anoder but all mobe in unity, it makes youh haid swim wid awe at de powah dat has mobed in such a mannah throughout de univahse.

When yo' comes to considah dat all dese countless myriads ob stahs dat shine in de firmanent may be wuhlds as big as ouhs, many ob dem supposed to be eben biggah dan de uth, yo' am struck wid wondah at it all an' den when yo' stops to contemplate what has taken place on de uth durin' de centuries dat hab rolled away since de time when God said, "Let dah be light," an' how mankind has done acted towahds each oder as nations an' as individuals, an' yo' comes on down to de last few yeahs which hab drenched de wuhld in human blood an' human misahry, when yo' think ob it all, in youh haht ob hahts yo' ax youhself if it am not about time foh eben Jehovah to become tiahed ob mankind an' to call upon de seben angels habin' de seben vials to go fo'th an' pouh out upon de wuhld de wrath ob a justly incensed Makah ob Heaben an' uth, dat de puhgin' ob mankind may begin.

John says, "An' dah were voices, an' thundahs, an' lightnin's; an' dah was a great uthquake, such as was not since men were upon de uth, so mighty an' uthquake, an' great." An' again de evangelist tells us dat "All nations hab drunk ob de wine ob huh fohnication, an' de kings ob de uth hab committed fohnication wid huh, an' de muhchants ob de uth am waxed rich through de abundance ob huh delicacies." If yo' will compaih de acts ob mankind ob de present wid what John says de angel accused dem wid, yo' can undahstand how a just God might feel mobed to pouh out de vials ob wrath upon a sin-cuhsed wuhld.

We has fohfeited about ebery right dat has been giben unto man foh his own good an' foh de bettahment ob his fellowman. Selfishness an' greed hab taken possession ob de wuhld an' men seem bent upon seein' how much selfishness dey can show towahds all oders. Take it in de common necessities ob life an' see how cliques an' combinations ob men hab cohnahed de mahkets on de necessities ob life an' fo'ced de prices beyond de reach ob any but de rich. Look at sugah. It am jest as abundant today, eben moah so, dan in de yeahs dat hab passed, when yo' could done buy from twenty to twenty-five pounds foh a dollah at retail, an' see what human greed has done. It has got it into de hands ob unscrupulous men an' fo'ced de price to twenty-three, twenty-five an' thuty-eight cents a pound. As wid sugah so wid all else, includin' flouh an' clothin'. Potatoes am in such demand dat dey were sold foh sixteen dollah a bushel in New York, yet dey am rottin' in train loads upon de side tracks ob Chicago an' elsewhah, so dat man can sell an' re-sell at Shylock profits, an' neber mobe a cahload. But dey pay demurrage upon de freight cahs an' hold dem dah to create a shohtage in de mahket until men am fo'ced to pay de exorbitant rates foh potatoes, one ob de cheapest ob all foods. A few yeahs ago dey couldn't bring six or seben cents a bushel an' were left to rot in de weah houses 'kase dah was no demand foh dem, yet dey am sellin' in de yeah ob ouh Lawd 1920 foh sixteen dollahs a bushel in de fust city ob de land.

Men entrusted wid de administration ob de law am grindin' down de unfortunate wid bankruptey proceedin's an' usin' de proceeds to be divided 'mong de lawyahs an' dem dat am s'posed to deal out justice to rich an' pooh alike.

Men who know dat de man who produces dat on which we all lib—de man who tills de soil—must be up in de mawnin' at foh an' fibe o'clock an' wuhk until sundown to get his crops raised an' de milk an' buttah cared foh,—dese men, knowin' dese facts, an' unwillin' demselbes to begin wuhk until half de fohnoon am gone an' quit when de sun am two houhs high, am axin' six an' seben an' ten dollahs a day foh dah time an' not doin' as hahd wuhk as de fahmahs who wuhk ten an' twelbe houhs a day.


Selfishness, human greed, rascality an' robbahry am on ebery hand. Murdah am de daily business ob hiached murdahers who chahge a giben price to kill an' to slay. Am it any wondah dat de Lawd God ob heaben has sent de destroyin' angels to pouh out de wrath ob an outraged God upon de wuhld until men shall tuhn from dah wickedness an' sin an' help oders instead ob hindahrin' dem?


De choir will join in singin',

"Mah faith looks up to Thee,

Thou Lamb ob Calvahry, Savior Divine,"

an' lookin' foh de blessin' we will be dismissed.





Friction band brakes — an exclusive Holt feature — stop either or both tracks instantly.

Brake adjustments quickly and easily made by merely turning a hand-wheel.

Ball thrust bearings at all points where end thrust is encountered.

Multiple disc dry plate clutches furnish power as desired to either track. An exclusive Holt feature that makes the "Caterpillar" able to "turn on a dime."

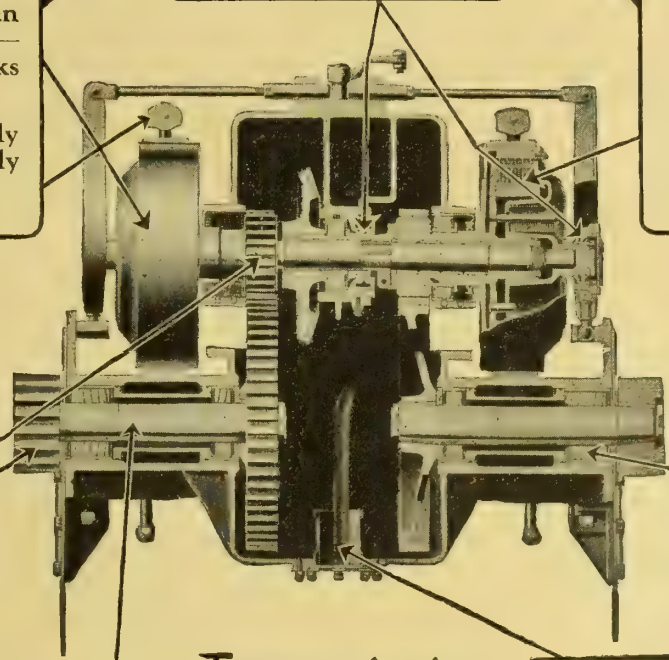
Gears, machine-cut from solid nickel steel forgings, and heat-treated — resist wear and defy shocks.

Anti-friction bearings carry all radial loads. More than thirty of these bearings in each "Caterpillar" Tractor.

Oil pumped through this strainer by positive pump is delivered under pressure to transmission gears.

All shafts made from nickel steel, hardened and ground to the 1/1000 part of an inch.

Transmission of 5-Ton "Caterpillar" Tractor



"Caterpillar" Tractor Design and Performance

From the war-tested Holt motor, on through the master clutch, transmission, drive members and Holt-treated track, invention, engineering ability, skilled workmanship and careful inspection combine to produce the acme of dependable and economical tractor performance.

There is but one "Caterpillar"—Holt builds it

THE Holt Manufacturing Company INC.

PEORIA, ILL. STOCKTON, CAL.



New York, N.Y. Spokane, Wash.

Out of the Wilderness

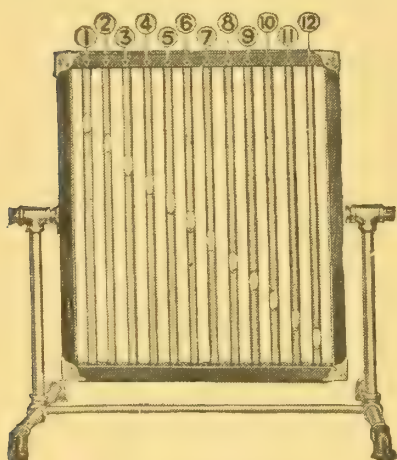
—that is where Balso Oils lead you.

Our chart clears up that hazy subject, "which Oil is correct."

When you understand how the Balso Balanced Oils are adjustable by number to any motor or machine in any condition or stage of wear—

Then all doubt fades away. No more Light, Medium or Heavy GUESS WORK.

No more wordy arguments. The question is settled absolutely and you know for the first time in your oil experience that you are right.



No. 1. Lightest Weight
No. 12. Heaviest Weight

Send for our chart and instruction book—it's free—or write to us for our recommendation for your particular motor.

SEND US A TRIAL ORDER.

We have a few openings for good live salesmen.

If you own a tractor, truck or automobile, get in touch with us.

Write nearest office.

Balso Oil Company

Toledo, Ohio Council Bluffs, Iowa

P. S. Send for FREE one-pound sample of our BAL-CYLENE HARD OIL. A Cup Grease made from Pennsylvania Steam Cylinder Oil. Nothing like it. Outwears all others. The Grease you have been looking for.

Poor Roads Cost Good Money

(Continued from page 8.)

greater extent through systematic hard road building than the farmers themselves. It is possible to get grain and stock to market when prices are attractive and without being dependent, as is so often the case, in one's selling operations on the condition of the roads. Hard roads eliminate a great deal of the isolation which has made farm life at times irksome and dreary. When the telephone first invaded the countryside it was hailed as a means of overcoming the isolation of the farm. And so it has. But it did not wholly bring the benefits expected of it in this way. It is not enough always to send one's voice over the wires. There are times when we must go ourselves—times when the doctor, or friends and relatives must come. If it is a question of life or death, we will go or they will come as the case may be, but if it isn't and the roads are all but impassible, it is apt to be different.

We believe it is a fact that poor roads cost in the long run more than good ones. The tax for each of the twenty years of the bonded period on the farms of the county of which we have made mention will be, we understand, in the neighborhood of twelve or fourteen cents per acre. The cost would have been much less than this had it not been for the war. If we recall aright, the original estimates were around nine cents per acre per year. Much of the paving was put in at pre-war prices but later, when the price of material and labor began to soar, the roads cost more to build, and this increased cost, of course, must be met by the tax payer. However, even at the increased cost the better highways are a paying proposition, for it must be remembered that the upkeep of dirt roads represents a larger expenditure per mile than most folks imagine. Actual records have shown it to be somewhere around a hundred dollars per mile per year when an entire county is taken into consideration. And this expenditure must be met year after year with no permanent benefits to show for the money.

Good roads bring financial return to the farmer in many ways, but there is no viewpoint which brings the matter home to him with greater force, perhaps, than that of hauling grain and other things to market and of getting things to the farm from town. This represents not only labor and time, either for himself or his hired help, but it represents wear and tear on wagons, trucks, autos and so on. Suppose we leave this last out of consideration and think only of the matter of saving time. An Iowa farmer states that he could average a saving of two or three hours

a week the year 'round if he had good roads under him. This strikes us as so conservative that we will base our calculations on three hours a week. This makes one hundred and fifty-six hours a year, or somewhat over fifteen working days. Now, what is a man and a team worth per day? At least six dollars—probably more in most localities in these times. Here, then, is a waste of \$93.60 a year. What name can we give to it that expresses it more forcibly than

that which he gives it, namely, "mud tax." And if a hard road tax were to increase taxes about twelve or thirteen cents an acre per year one would have to have a farm of over seven hundred acres to equal this \$93.60. Naturally, a farm of this size would necessitate far more hauling than we have figured on. Consequently, the waste of time and the cost thereof, would be larger. We have seen lots of different ways of figuring how much mud costs the farmer every year. We have yet to see it figured by disinterested parties in such a way as to show it to cost less than good roads.

Threshermen I Have Known

(Continued from page 7.)

"Dave has threshed for us for seven years straight endways," the captain of one ring told me. "There is one thing we like about Dave, he never gets excited. When anything goes wrong he doesn't hop around like a chicken in a skillet. He just fixes it. I never saw him mad in my life—oh, maybe he gets sort of cross sometimes but he never goes wild like some fellows."

I have often wondered why there is a tendency among threshermen to "go wild" when things go wrong. If there is any time when a man should keep serene then is the time. I confess that I cannot always do it but I do admire it in others.

It pays, too. These other men who stood at the top of the list in my county were the same kind of men. They were quiet fellows, they did not seem to be hustlers, even, but they got things done. They were always ready and inquiry brought out the fact that they had their machines in good shape when they started and they kept them that way. Sometimes it was necessary to make a temporary repair in some makeshift manner but it was made permanent as soon as possible. One man told me that his thresherman "took a lot of time to fix a thing but when he got done it stayed fixed."

I may have put too much stress on the even temper of these men but that is the only way I can account for their almost uniform success. Threshing is a rather high tension job and we all want and need all we can get. We have a lot to contend with—much more than the man who looks on understands or ever will understand until he goes in debt for a rig and goes out into the field and tries to make a living wage while he is paying for it—but worry does not help; wrangling does not help; and jawing and cursing and getting mad makes every one concerned tired. It loses friends and it loses work which means that it also loses the thresherman who indulges in the practice, money.

I never realized the worth of a

quiet man who fixes things so they stay fixed quite so much as I have since I hired a separator tender a couple of years ago. That man impressed me as being the slowest human being I ever saw. Back at the engine I used to groan every time I saw him start to move and I caught myself several times starting to do his work the first few days he was with me. But it began to get through my head that he made repairs in a remarkably short time for a slow man. I watched him pretty close those first few days for there was no one to take his place and it was him or worse. The more I watched the more impressed I became that he was not slow—he just seemed slow. He never made an unnecessary movement and he had a faculty of being in the right place at the right time. As time went on, I found he seldom if ever had to make the same repair twice and although he did not claim an extensive experience and was always willing to be told, I never had to tell him more than once. I may not keep that man always but if I do not, the fault will not be mine.

If my experience in the field has been worth anything it has proven to me, at least, that it pays and pays well to make repairs early and to make them right. Own a good set of belts and a good machine canvas; work a reasonable number of hours; and go over the rig every morning whether it needs it or not, and keep her humming until time to stop. Swearing at things does not help. Whatever your individual ideas may be on the subject it is a very reasonable conclusion that your customers do not approve of it and they are the folks you are being paid to suit. We cannot let the work drag but the old adage that haste makes waste is certainly true around the threshing rig.

Of course, there are times when the pop valve sticks and lets go after awhile with a roar but better watch the pop valve close. Even that separator man of mine lets go once in

COST LESS—LAST LONGER

HOO-HOO Belting is made from extra heavy duck and has four rows of stitches to an inch. It is treated with a special compound that keeps it at all times pliable and unaffected by unnatural conditions, such as water, steam, heat, acid fumes, etc. It will not crack or harden and is of strictly uniform quality, carefully stretched and seasoned before leaving factory.

HOO-HOO Belting will transmit the maximum power, stand an unusual amount of abuse, which enables you to thresh more grain per hour. It is the highest class thresher belt manufactured.

HOO THRESHER

Net Cash Prices

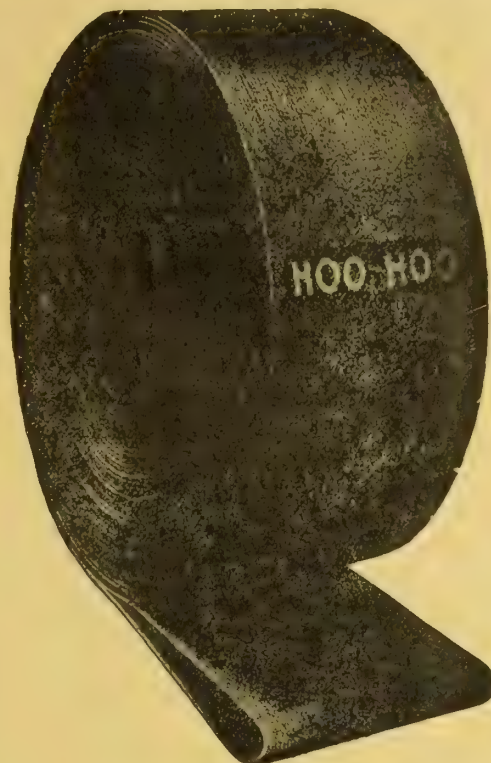
Lgth. Ft.	Width In.	Ply	Each	Lgth. Ft.	Width In.	Ply	Each
50	5	4	\$22.05	100	7	4	56.25
50	6	4	25.65	100	8	4	63.45
75	5	4	31.95	125	6	4	61.20
75	6	4	37.35	125	7	4	69.75
100	5	4	42.30	125	8	4	78.75
100	6	4	49.50	150	7	4	83.25

Terms, cash to accompany order. Freight prepaid.

If interested, we shall be pleased to quote prices on "HOO-HOO" Canvas Stitched Belting in Rolls, Oak Tanned Leather Belting and Lace Leather. Also any length, width or ply endless belt not mentioned above. 5% discount for group purchases of five or more belts.

Please Mention Length, Width and Ply Required

National Leather Belting Company, 342 East Thirty-Eighth St. New York City



GUARANTEE

Belts should be run in the center of the pulley and should not be held in place by any object that will injure or break the edges.

Results of overloading, injurious use of belt dressings, or chafed, frayed or nicked edges do not constitute defects.

Positively no allowance unless claims are made within 30 days from date put in use and belt returned to maker, freight prepaid, with the guaranteed tag attached.

We will replace any belt proving defective in material or workmanship.

HOO BELTS

Net Cash Prices

Lgth. Ft.	Width In.	Ply	Each	Lgth. Ft.	Width In.	Ply	Each
150	8	4	93.60	160	8	5	124.65
150	9	4	103.50	160	9	5	137.25
125	7	5	87.30	150	8	6	140.85
125	8	5	98.10	150	9	6	155.25
150	7	5	103.95	160	8	6	149.85
150	8	5	117.45	160	9	6	165.60
150	9	5	129.15				

Terms, cash to accompany order. Freight prepaid.

Mention The American Thresherman and Farm Power

THE PORT HURON CHAIN of SUPPLY STORES

HAVE YOU RECEIVED YOUR COPY OF THE 1920 PORT HURON SUPPLY BOOK - WITH THE LATEST AND LOWEST NET PRICES ON EVERYTHING FOR THE THRESHER, THE MILLMAN AND FARM POWER OWNER?

A Copy Free for the Asking. Write Us.

WE GIVE FALL TERMS at SLIGHTLY HIGHER PRICES

References Required With New Accounts

JUST A FEW OF THE GOOD THINGS GLEANED FROM THE 1920 PORT HURON SUPPLY BOOK

GENUINE ENDLESS SAWYER DRIVE BELTS—Cash Prices

150 ft.—7 inch—4 ply	\$105.50
150 ft.—8 inch—4 ply	118.50
150 ft.—8 inch—5 ply	148.75
160 ft.—8 inch—5 ply	157.75

KLINGTITE ENDLESS RUBBER BELTS

Klingtite endless rubber belts fill a long felt need for the thresher who demands a belt that will not stretch excessively, shrink, slip or rot when exposed to outdoor and variable climatic conditions.

Klingtite belts will cost you as follows:

100 ft.—6 inch—4 ply	\$77.90
100 ft.—7 inch—4 ply	90.72
125 ft.—6 inch—4 ply	96.42
125 ft.—7 inch—4 ply	113.05
150 ft.—8 inch—5 ply	182.16

HURON OILS AND GREASE

Prices include barrels, half barrels and cans. Full barrels contain 50 gallons or more. Half barrels contain 28 gallons or more.

HURON CYLINDER OIL

This is a clean, dark, heavy-bodied oil, made from high grade Pennsylvania crude, and is particularly adapted for engines carrying high pressure—100 pounds or over. We guarantee satisfaction to the purchaser.

Barrels (50 gals. or more) each	\$22.50
Half barrels (28 gals. or more) each	14.40
10 gallons, jacketed cans, each	5.85

HURON RED ENGINE OIL—Light and Heavy

Is not stringy but an excellent lubricant, particularly in cold weather. Used by us in all of our factories for general lubrication. We guarantee satisfaction to the purchaser.

In ordering state whether light or heavy is wanted.

Barrels (50 gals. or more) each	\$19.80
Half barrels (28 gals. or more) each	12.60
10 gallons, jacketed cans, each	5.18

HURON HARD OIL

Warranted as suitable for highest speeds in thresher, saw mill and other similar machinery in heaviest bearings, open boxes and compression cups. Will not gum or corrode, free from grit and made from purest lubricating oils. A high grade oil at a very reasonable price. We guarantee satisfaction.

NO. 3 MEDIUM HARD FOR GENERAL USE

In barrels and half barrels, per lb.	\$0.11-7 10
25 lb. pails, each	\$4.05
10 lb. cans, each	2.03

HURON AXLE GREASE

This is a good, clean, light colored grease, suitable for axles, gears, etc.—not for machinery journals. We guarantee satisfaction to the purchaser.

In barrels and half barrels, per lb.	\$0.07-2 10
100 lb. keg or four 25 lb. kits	\$8.10
25 lb. wood kit, each	2.25
50 lb. keg or two 25 lb. kits	4.28
10 lb. wood kit, each	1.13

SAWYER CYLINDER TOOTH WRENCH

Something new. Positive gear drive. The gears in this wrench are steel and machine cut. No ratchets to wear out.

This wrench will give more speed and leverage than the ordinary kind as it is very powerful and yet is easy to operate.

Price each \$7.65

Be sure to give size of nut to be used on and whether square or hex.

CLIPPER BELT LACERS—Every Thresherman Needs One

The "Clipper" Belt Lacer No. 3 is a 24-pound machine which can be carried to the belt and permits the lacing to be done without removing the belt from the shaft.

A belt 6 inches wide can be laced at one operation. If the belt is wider than six inches, the operation is repeated—if narrower, the standard card of hooks is cut to the proper length.

No. 3 Belt Lacer, each \$25.00

The "Baby Clipper" No. O—4 inch is a small lacer which can be used in connection with an ordinary vise. The hooks are inserted and held in place the same as with the No. 3 Lacer. As the jaws of the vise are brought together, the hooks are pressed into the squared belt end, and the lacing when completed is identical with that made with the No. 3 Lacer. No. O "Baby" Belt Lacer, each \$6.50

COMPLETE STOCKS - LOW PRICES - QUICK SERVICE

Pioneers in the Thresher Supply Business - At it Twenty Years
Money Refunded if goods not as represented

Port Huron Engine & Thresher Co.
Port Huron, Mich.

Port Huron Engine & Thresher Co.
Logansport, Indiana

Port Huron Company,
of Illinois
Peoria, Ill.

Port Huron Mach'y
Company, Ltd.
Des Moines, Iowa

Port Huron Mach'y
Company, Ltd.
Lincoln, Nebraska

Port Huron Mach'y
Company, Ltd.
Minneapolis, Minn.

Port Huron Engine & Thresher Co.
Wichita, Kansas

a great while. I saw him climb over on a bundle wagon one day. His eyes bored like gimlets and there was a set expression on his face. He took the man on the wagon by the shoulder.

"If I have to tell you again about piling bundles up butts first and three deep on that carrier I am going to take you off of here and learn you something," he said very deliberately and distinctly, but he had already told the man three times about that failing and the grain was soggy, long, woolly rye at that—besides he was a big man and the other was not so large. You or I might be unable to get by so easily.

Better Belt Management

WM. D. YOUNG

One is led to wonder if threshermen and power farmers do not too frequently overlook the advantages of giving their belts proper care because they do not run very many belts.

In these days, however, new belts cost much money, and the goods which those belts turn out represent more money than they perhaps ever did before, so that it is well worth while to watch the condition of the belts and treat and handle them properly.

Aside from first cost, there is one factor in belt operation which is at the bottom of a large part of the cost and trouble attending the operation of belts and which is frequently overlooked.

Except when run on long centers belts ordinarily have to be run tight to transmit their load without slipping. In ordinary practice the tension put on belts will range from thirty to fifty pounds per inch of width for a single belt. In other words a six-inch belt will average a tension strain of about five hundred pounds. This is on the belt all of the time and is in addition to its working load. This strain is stretching the belt by pulling the fibers apart, which in time will necessitate the cutting out of a good strip of belt, it is breaking laces, putting undue friction on bearings which demands excess oil, is wasting the power necessary to overcome this friction and is costing money to keep up the tension.

And all this is simply to prevent the slipping of the belt. The slipping moreover generates heat between the belt and the pulley which is liable to burn the belt and cause subsequent cracking. Belt users too often fail to realize that this tension is at the bottom of almost all belt troubles, and that if they could prevent the slipping by other and more beneficial means than by tension most of their belt troubles and expenses would vanish.

It is possible to so treat leather

and canvas belts that they will become and remain pliable and waterproof, will not dry out nor crack, and to so handle rubber belts that they will not develop a polished and slippery surface, so that all belts can be run easy or slack without the necessity for tightening strain, and pull full loads.

"Who discovered America?"

"Ohio," replied the little girl.

"No. Columbus discovered America."

"Yes'm. Columbus was his first name."—*Washington Star*.

Separator Users Demand Timkens

Canton, Ohio, February 21, 1920.

GEO. J. CUTRIGHT,
P. O. Chillicothe, R. F. D. 6
Dealer in General Merchandise and Plano Harvesting Machinery

The Timken Roller Bearing Company,
Canton, Ohio.

Gentlemen:—

We have a separator that has always given us trouble with cylinder boxes. We are going to have a new shaft put in this year.

If your box, as advertised in "American Threshermen" can be put on this machine, send me cost of same, complete.

Will it stand the heavy work required of such a bearing? Please give me complete information.

Yours truly,

George J. Cutright

JOHNSON HARDWARE

me. Use Furnace and Implements
John Deere Plow and Sides

Johnson, Washington March 9, 1920.

The Timken Roller Bearing Co.,
Canton, Ohio.

Gentlemen:

Will you kindly give me your price on one set of cylinder and one set of blower bearings for 32 - inch separator?

Yours truly,

W. H. Johnson

CHAS. VORLICEK
DEALER IN
Farm Implements, Machinery & Threshers' Supplies

SILVER LAKE, MINN. March 19, 1920.

The Timken Roller Bearing Co.,
Canton, Ohio.

Gentlemen:

Please tell me the price of two cylinder boxes for a separator, 16 bar, 2 1/2 inch shaft.

Hope to hear from you soon.

Yours truly,

Chas Vorliczek

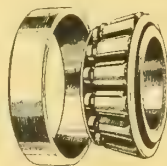
EVERY operator knows that the job of the separator cylinder shaft is a tough one—a sure enough Timken Bearing job.

Some separator builders will not admit that such good bearings are necessary, but the men in the field have the facts.

More than 95 letters have come in, in the past few weeks, inquiring if Timken Bearings could be put on old cylinder shafts. The three letters on this page show what practical men think of Timken Bearings.

THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO

Plants at Canton, Ohio; Columbus, Ohio
European Factories, Birmingham, England; Paris, France
General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio



STANDARD PRACTICE
The use of Timken Tapered Roller Bearings at points of hard service in the great majority of leading tractors—and in power-driven farm machinery—is proof of leadership established on the tapered principle of design, quality of manufacture, performance, and service to the automotive industry.

TIMKEN BEARINGS

Wallis Separator Announced

The Wallis tractor has stimulated the J. I. Case Plow Works to fresh enterprises. They are now having built a thresher to be used with the Wallis tractor and similar tractors of like power. The lines and principles used will be the same as those used for eighty-four years by the Sawyer Massey Company of Hamilton, Ontario. The thresher, a 24"-40", is to be called the Wallis Thresher.

This new thresher will be twenty-six feet long, weigh two tons, and have a capacity of between 750 and 1,200

bushels per ten hours. It has been designed that its makers claim it will do ninety-two to ninety-seven percent of the separation at the cylinder.

No doubt many of our readers will be interested in comparing this new separator with the old time-proven models, such as Case, Avery, Rumel, and others. We may be able to furnish a cut of this model in a future issue.

"What is heredity?"

"Something a father believes in until his son begins acting like a darn fool."—*American Legion Weekly*



See that this trade-mark in colors is on each side of the stacker attached to your thresher.

SAVE THE GRAIN!

Grain-Saving Stackers SAVE Your Grain

THE GRAIN-SAVING STACKER has been adopted by leading separator makers throughout the United States and Canada. Because it saves the grain wasted in the ordinary process.

Faulty sieve adjustments, improper regulation of the blast, speed variation, unfavorable weather, careless feeding—all these are grain wasters. And the Grain-Saving Stacker is a check on them all. It puts the grain in your sack where it belongs—not in the straw stack.

You can be sure that your grain will be saved, by insisting and demand-

ing that the separator which does your threshing must be equipped with the Grain-Saving Stacker.

The Grain-Saving Stacker is the most important improvement in threshing machinery which has been developed in the last twenty-five years. It is so important that leading manufacturers in Canada and America equip with it.

Write to any in the list below for full information about this profit saver

List of Manufacturers

United States

Aultman & Taylor Machinery Co., Mansfield, Ohio
Avery Company, Peoria, Ill.
A. D. Baker Company, Swanton, Ohio
Banting Manufacturing Co., Toledo, Ohio
Batavia Machine Co., Batavia, N. Y.
Cape Mfg. Co., Cape Girardeau, Mo.
J. I. Case Threshing Machine Co., Racine, Wis.
Clark Machine Co., St. Johnsville, N. Y.
Ellis Keystone Agricultural Works, Pottstown, Pa.
Emerson-Brantingham Co., Rockford, Ill.
Farmers Independent Thresher Co., Springfield, Ill.
A. B. Farquhar Co., York, Pa.
Ferdinand Machine Works, Ferdinand, Ind.
Frick Company, Waynesboro, Pa.

Harrison Machine Works, Belleville, Ill.
Huber Manufacturing Co., Marion, Ohio
Illinois Thresher Co., Sycamore, Ill.
Keck-Gonnerman Co., Mt. Vernon, Ind.
Leader Tractor Manufacturing Co., Des Moines, Iowa
Link Mfg. Co., Kansas City, Mo.
Minneapolis Threshing Machine Co., Hopkins, Minn.
Port Huron Engine & Thresher Co., Port Huron, Mich.
The Russell & Co., Massillon, Ohio
Russell Wind Stacker Co., Indianapolis, Ind.
Sawyer-Massey Co., Ltd. (U. S. Agency), Moline, Ill.
Southwest Mfg. Co., Oklahoma City, Okla.
Swayne, Robinson & Company, Richmond, Ind.
The Westinghouse Company, Schenectady, N. Y.

Canada

Robt. Bell Engine & Thresher Co., Ltd., Seaforth, Ont.
Dominion Thresher Co., Ltd., New Hamburg, Ont.
J. B. Dore & Fils., Ltd., Laprairie, Que.
Ernst Bros. Co., Ltd., Mt. Forest, Ont.
John Goodison Thresher Co., Ltd., Sarnia, Ont.
Hergott Bros., Ltd., Mildmay, Ont.
MacDonald Thresher Co., Ltd., Stratford, Ont.
Sawyer-Massey Co., Ltd., Hamilton, Ont.
Stewart Sheaf Loader Co., Ltd., Winnipeg, Man.
Wallace Machine Works, Ltd., Sussex, N. B.
Waterloo Manufacturing Co., Ltd., Waterloo, Ont.
R. Watt Machine Works, Ltd., Ridgetown, Ont.
George White & Sons Co., Ltd., London, Ont.

*The Grain-Saving Stacker Originated With the Indiana Manufacturing Company, Indianapolis, Ind.,
Who Also Originated the Wind Stacker*

Organization Notes

(Continued from page 55.)

Entertainment was furnished by the now famous J. P. Altstaetter Family Band of Columbus Grove, Ohio. Mr. Altstaetter is a thresherman and every one of the band is a member of his family. It was surely a pleasure to have them on the program.

The meeting opened with an Address of Welcome by Mayor Burkhart of Lima, Ohio, a polished orator and a gifted man. His welcome to Lima was most cordial, and his remarks were well taken.

C. A. Rahn, chaplain of the U. S. Army, was next on the program, and as he had just come back from Russia, his talk was most interesting to all. He assured the boys that it was not the aim of the American army to take the men and boys from the farm who were working, but it was their aim to get into the army men in town who did not like to work, give them education and show them the blessedness of work. His discourse upon conditions in Russia showed all present why he should be mighty glad to be an American and live in the good old U. S. A. This was a very good talk.

A. E. Fisher, president of the Ohio Brotherhood of Threshermen, then gave his usual good address upon "Organization." Mr. Fisher is a forceful speaker and his words carry weight with the threshermen of this state. He has done a great work looking after the interests of the threshermen and the boys have every reason to be proud of him.

Brother Geo. Durban, secretary of the Ohio Association, then gave a very instructive talk on "Insurance and Legislative Matters." The benefits of the Ohio Threshermen's Mutual Insurance Association were discussed by Mr. Durban in his usual efficient manner, and nearly all the boys took out insurance on their rigs after the meeting as a result of his talk. Mr. Durban's work before the Ohio State Legislature during the past session was then explained, and he is surely a man which the Ohio Brotherhood wants to hang on to. He knows the ins and outs of the whole business and is worth much to the Brotherhood.

After dinner, which was kindly provided by the Lima boys, a parade was formed of the threshermen present and it marched to Memorial Hall with the band at its head. The mayor and some of the police department joined in, and the whole was quite impressive.

The afternoon session opened with a talk upon "The Origination of The Organization," by our old "war horse" J. B. Parker of The American Thresherman and Farm Power, and as usual his recital was most instructive and interesting. The boys are sure with "Jud" all the time. They

can never repay him for what he has done for them.

Hon. G. A. Stauffer of Ottawa, Ohio, then gave a talk upon "The Patriotic Duty of the True American." This talk was well worth the price of a membership in the Ohio Brotherhood, and it was very well received.

Next was a discussion of "Belt-ing," by Mr. Sawyer of the Goodyear Tire and Rubber Company which was most instructive.

Tom Walker of Toledo then gave a short talk in connection with highway troubles in this section, which led to a discussion of the wheel with the disappearing cleat. It was admitted by all present that it was inadequate, and that the solution was to organize and fight any legislation or legislators who proposed such things.

The evening was spent enjoying a

musical entertainment by the Altstaetter Band. This was fine, and it was too bad that more of the threshermen could not be at this meeting.

Dyke's Auto Encyclopedia

This book has again been revised and greatly improved. It could appropriately be termed a "Repairman's Guide." In addition to its mass of information on automobiles, covering every detail from the construction and repair of the axle to the repair of radiator and top, many new subjects have been added. For instance; how to make electric tests of the starting motor, generator, battery, coils, magnetos, etc.

The book covers practically every phase of the automobile industry and deals with automobiles, trucks, tractors, motorcycles, airplanes, air-

plane engines, including the Liberty engine, fully illustrated.

There are supplements with three hundred thirty-two illustrations of the Ford and Packard car, printed in colors.

The author, Mr. A. L. Dyke, a pioneer. He originated the first automobile supply business, published the first practical book of automobiles and manufactured and marketed the first constant level (float feed) carburetor in America. Mr. Dyke's latest origination is the of working models, of parts of the automobile, for instruction by mail. This twelfth edition sells for six dollars. Published by A. L. Dyke, St. Louis, Missouri. During the war this book was used extensively by our Government and was also sanctioned for use in the Schools of Military Aeronautics, England.



Champion

Dependable Spark Plugs

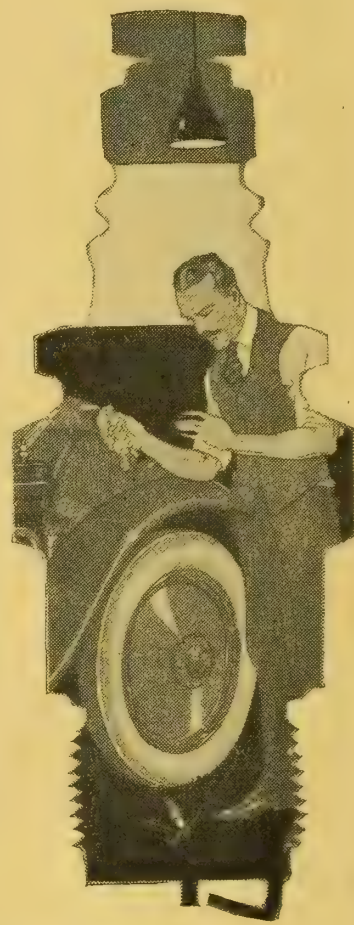
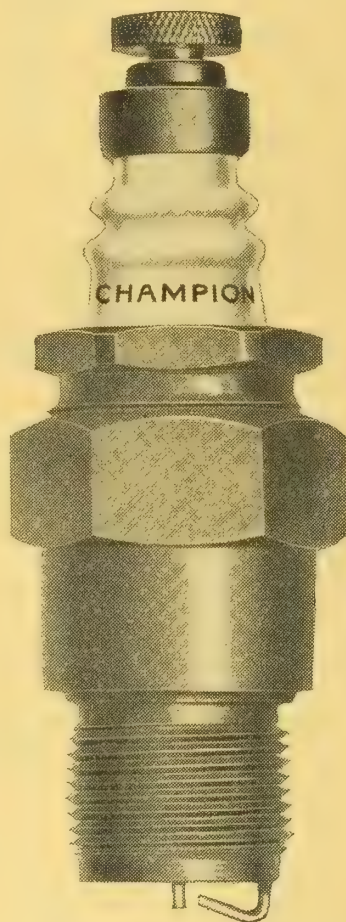
Did You Ever Lose a Dollar?

THAT is what it means to you when you drop and break a spark plug. At least one out of every twenty spark plugs is broken in one way or another. Figured on that basis Champion Spark Plugs with an annual output of over 25,000,000 save their users over a million dollars a year on breakage loss alone.

Our famous No. 3450 Insulator has been developed and strengthened to such a degree that car owners who use Champion Spark Plugs are free from spark plug breakage and from trouble due to heat, shocks and temperature changes.

There is a Champion Spark Plug for every type of motor car, truck, tractor, motorcycle and stationary engine. Order a set from your dealer today.

Be sure the name Champion is on the Insulator and the World Trade-Mark on the Box



Champion Spark Plug Company, Toledo, Ohio



The Great Minneapolis Line



A Note of Warning to Our Friends:

If you are in need of and have decided to buy a new steam engine for threshing purposes

Don't Put Off Buying—Place Your Order Now

There is a large demand and a small supply to satisfy it.

**Minneapolis
Engines
are
Reliable
Durable**

Easy to Operate

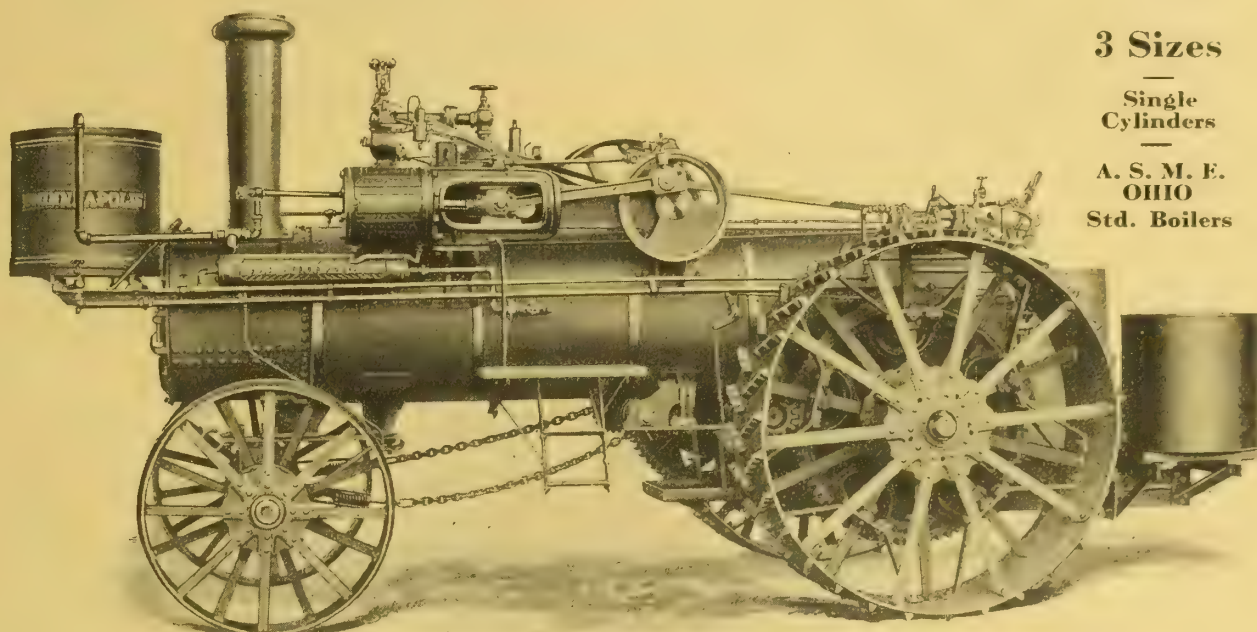
**Economical on fuel and
upkeep expenses**

**Ask
Any
Owner**

3 Sizes

**Single
Cylinders**

**A. S. M. E.
OHIO
Std. Boilers**



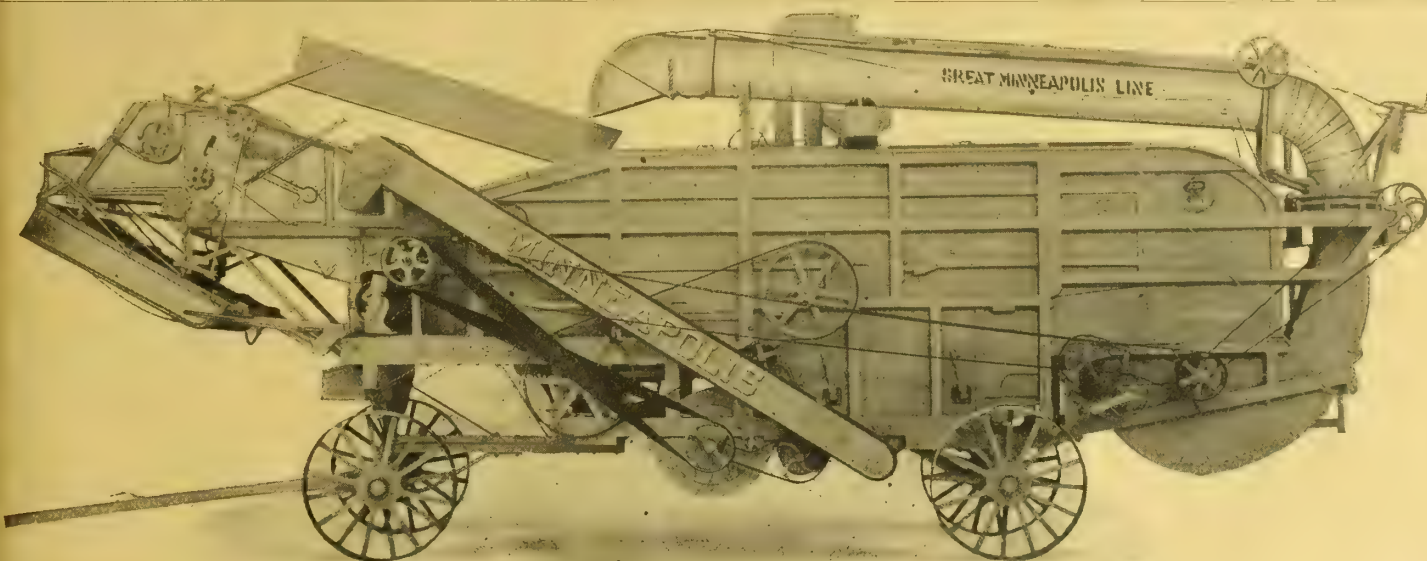
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DURABLE

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**Our
Customers
are
our
References**

**We want
to send
you our
Catalog**



"It Saves the Farmer's Grain"

Minneapolis Threshers are in great demand. They are **Popular** because **Satisfactory** to both the thresherman and farmer. Fast threshing, thorough separation, good cleaning, ease of operation, light up-keep expense and durability make the Minneapolis the Popular Thresher. *Built in 9 sizes with all labor saving attachments and to suit any power.*

The Minneapolis Threshing Machine Co.

Hopkins

(West Minneapolis)

Minnesota

BRANCH HOUSES:

ABERDEEN, S. DAK.
MASON CITY, IOWA

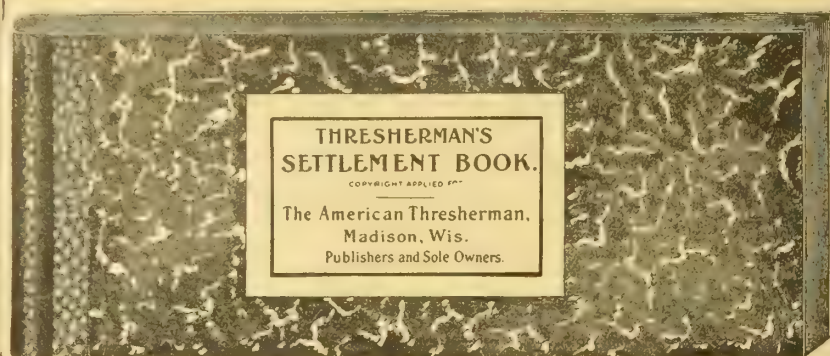
FARGO, N. DAK.
WICHITA, KANS.
GRAND FORKS, N. DAK.

LINCOLN, NEB.
COLUMBUS, OHIO

SIOUX FALLS, S. DAK.
DECATUR, ILL.

BILLINGS, MONT.
KANSAS CITY, MO.
WINNIPEG, MANITOBA

FOND DU LAC, WIS.
REGINA, SASK.



Time to Think of Settlement Books

Again it is threshing time—or very near it. Soon busy outfits will be humming about in the fields. Again the Settlement Books are needed.

Big Fresh Supply

Our printer has just made delivery on a large order, which we placed some time ago in anticipation of a lively demand this summer. There's enough Settlement Books to go around, and we can make immediate delivery.

But why wait until you're ready to start out? Put in your order now for the number you think you'll need. And that part of your preparatory work has been taken care of.

No Advance, Still 25 Cents

Although the cost of printing and paper has advanced tremendously during the past year, or even months, we are still filling orders for Settlement Books at the old price, 25 cents.

The
AMERICAN THRESHERMAN
and FARM POWER

Mention The American Thresherman and Farm Power

Uncle Silas

SMILE and you have a crowd, weep and you play a lone hand.

JORDAN is no harder road to travel than you make it, Ezra.

THE Lord takes care of His own, but He expects you to liquidate with the butcher, the baker and candlestick maker.

WATCHFUL waiting is all right, in some cases, but getting out and hustling is what brings home the bacon.

WHEN you see some poor devil on the down chute, don't grease the track; throw on a little sand.

IF you do a kindness for one less fortunate, don't advertise the fact. It takes the good taste out of it.

IT must have been very gratifying to Old Man Noah, that he was both Admiral and Secretary of the Navy, for it prevented any scandal afterwards.

BBETTER a dinner of spaghetti with tomato sauce, and with pure water to wash it home, than a banquet of dainty meats, and wine that bubbles and with women not of thine own herd to help thee lick it up.

WHEN you hear a fellow yelling from the housetops about how honest he is, then is the time to shift your pocketbook from your pants pocket to your sock.

WHEN thy spouse awaiteth thy coming until late in the night, when thou has dallied with the pasteboards, and boiled the pot in vain, and when she maketh a roar, and sayeth unto thee, "Long have I waited thy coming, for I am lonely," answer her with a "Yes'm!" and there shut off the flow, and spread not more conversation, that her tongue be broken and that peace be in thy house, for if thou keep silence, then it is with her like unto pumping up a tire with three punctures, she maketh no speed; and ere long will she subside. It is back-talk that breedeth conversation in upper C.

ACCORDING to an ancient parchment recently discovered in the tombs of Egypt, and purporting to have antedated Josephus, we are informed that Adam's first wife, Lilith, who was cast out of Paradise, afterwards consorted with Eblis, the Prince of Darkness, and the result was the birth of Djinnns, or phantoms, to whose influence Solomon, king of Israel, owed his magical power. The Masonic fraternity has been accused of a great many things under blanket form, which, like charity, covereth a multitude of sins. Solomon, who seems to have been the head of the herd in Masonry, likewise was long on consorting, but this is the first hint of old Man Adam having espoused anybody excepting old Mother Eve.

THE many friends of Aunt Malinda will be glad to learn of her safe return home, feeling much rested and refreshed from spending the winter in southern California. In the meantime, your Uncle Silas is still on the job with the regulation number of hooks per line required by the lynx-eyed game wardens who infest the erstwhile placid waters of Lake Waubesa, and with enough "night crawlers" in reserve to attract a thousand "blue-gills," and holes punched for more.

Years ago when the "drippin's of the canteen" were to be obtained at every horse trough in Wisconsin, Silas had a nice bed of mint arranged so that he might give to the thirsty Southerner who comes hither to escape the acrid plains of the Southland, a draught of mint julep, his favorite decoction, and to the "Yankee" a "drop of the crather" with a sprig of mint as a farewell accompaniment.

Now all these pleasures have been deprived the wayfaring brother on the Jericho Road, and this "mint bed" remains as a mockery and as an ancient landmark of the easy going days. Aunt Malinda's principles have triumphed and the drying-up process leaves naught but lemonade to soothe the scorching cophagus of the tired traveler and fisherman. And sugar being out of reach, only water straight is left to offer him who was once wont to make his astronomical and nautical decoctions through an inverted bottle, grunting while the gurglet of "Fauerbach's Log Cabin" trickled down the subterranean caverns of his digestive tract. Therefore, be it known that this "mint bed" is now for sale at a bargain counter price, for the country is still democratic.

Let the Truck Do It

(Continued from page 9.)

Klassy has paid forty dollars a year to prevent untold depreciation on possibly ten thousand dollars' worth of machinery. And he still has a good shed.

Furthermore, Mr. Klassy uses the shed every night. He doesn't leave a tractor or a truck sitting in the field or on the road because he *may* use it the next morning. As we said before, he *practices* these little things that, spread over some years, are bound to spell success.

Already his home reflects his success. His wife was "putting out" a big wash the day we visited him. We marveled at her cheerfulness, as we recalled with distaste the few times when we, as a small boy bent on a holiday, had been impressed into service to turn a dripping wringer. A trip to the cemented basement helped to explain this. There was a smooth floor, convenient benches and an electric washing machine. In the kitchen shone a white enamel sink. Three bright faucets invited us to use "soft water hot, soft water cold; hard water, drinking water, not a day old." Mrs. Klassy will assure any farmer's wife that these things all help. And the truck has made them possible. If any improvement is desired, the truck is ready to make a quick round trip and fetch the desired materials.

A list of the functions performed by the Klassy truck would mean a diary of the year's tasks. It hauls the livestock to the railroad. Returning, it brings a load of tiles to cover a new cistern. It carries away milk and returns with oil. It never gets scared and it doesn't mind heat or cold. No wonder Mr. Klassy says he will never farm without one!

Only One Tractor Show

There will be but one National Tractor Show during the ensuing year. Columbus is the favored city. Date of the Show will be announced later.

This decision was reached at the May 14 meeting of the National Demonstration and Show Committee of the National Implement & Vehicle Association, held in Chicago. Claims of various cities were heard and carefully weighed, among these considered being Minneapolis, Kansas City, Wichita and Atlanta.

The switch in the previously announced plans for four shows was brought about by the present uncertain transportation conditions and other complicating circumstances. A questionnaire submitted to tractor manufacturers of the N. I. & V. A. elicited the information that the sentiment was for one show only, and this expression was the determining factor in the committee's action.

A REMEDY FOR SCALE THAT DOES NOT FAIL

U. S. G. Co's Mexican Boiler Graphite is the surest, safest, least expensive and most thorough of all scale remedies.

It is equally effective in any feed water, regardless of the nature of its scale-forming impurities.

It softens old hard scale so that it may be easily removed and prevents further hard formation.

It does this by mechanical not chemical action and without harming the boiler in the slightest degree, because it acts on scale and scale only.

It makes boiler cleaning easy and costs only a few cents a day.

You can't afford not to use it.

U. S. G. Co's MEXICAN BOILER GRAPHITE

Cut out this ad, put your name and post-office address on the margin, mail it to us and we will send you literature and full particulars on Graphite as a scale remedy. The sooner you do this, the more money, time and labor you'll save yourself or your men.

WE ALSO MAKE FOR FARM POWER USE: U. S. G. Co's No 205 Lubricating Graphite.

U. S. G. Co's Mexican Graphite Transmission-Differential Lubricant.

U. S. G. Co's Mexican Graphite Cup Grease.

U. S. G. Co's Mexican Graphite Journal and Gear Grease.

U. S. G. Co's Mexican Plumbago Axle Grease.

U. S. G. Brushes for farm lighting systems.



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LARGEST MINERS OF GRAPHITE ON THIS CONTINENT

Mention The American Thresherman and Farm Power

Columbus was selected as a central point which would permit a good representation from the East as well as from the West. The state fair buildings will be used for the exhibition.

The committee's decision for holding but one show is explained in the following resolution, unanimously adopted:

WHEREAS, Since the decision of this committee to have four National Tractor Shows there have been marked changes in the economic and industrial conditions of the country, and there is now and promises for some time in the future to be, a serious shortage of transportation facilities as well as a general shortage of both labor and materials and

WHEREAS, At the spring meeting of the Tractor and Thresher Department of the National Implement & Vehicle Association a questionnaire was directed to be sent to the manufacturers of tractors, members of the Department, asking the members to express their preference as to the number of tractor shows which the committee should put on, and in response to such questionnaire more than three-fourths of all the members voting expressed their preference for holding one tractor show only, now therefore,

BE IT RESOLVED, by the National Tractor Demonstration and Show committee that the action of this committee heretofore taken providing for the holding of four National Tractor Shows be hereby rescinded.

BE IT FURTHER RESOLVED, that the Na-

tional Tractor Demonstration and Show committee put on during the ensuing season one National Tractor Show.

FURTHER RESOLVED, that the invitation of the City of Columbus, Ohio, through its Tractor and Implement Club be accepted and that the one National Tractor Show to be put on by this committee be held at Columbus, Ohio, at a date hereafter to be selected.

Clark New E-B Sales Manager

"We are pleased to announce to the trade," writes A. T. Jackson, vice president and general trade manager of the Emerson-Brantingham Company, "a new addition to and change in our sales organization. W. L. Clark is appointed domestic sales manager with Frank M. White as assistant manager."

Mr. Clark has spent his lifetime in the implement industry. He was first connected with the Moline Wagon Company, which was later absorbed by Deere & Co. His next connection was with the Moline Plow Company—first as advertising manager, then branch manager, and

later division sales manager. He accepted the position of general sales manager for the Samson Tractor Company upon its entry into the tractor field, resigning recently.

The Old Reliable

Buller Automatic Coupler

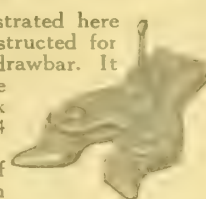
The style illustrated here is especially constructed for engines with flat drawbar. It is made for three sizes of bars, 3x4, 2 1/2 x 3 1/2 and 1x4 inches.

Drawbars of other sizes than these can be made to fit with a little help from your blacksmith.

This is but one of the many different styles—there's a Buller Automatic Coupler for every engine.

Illustrated catalog with full description and prices will be mailed on request.

Buller Coupler Co., Hillsboro, Kans.



For Sale and Want Department

In these columns any person may advertise for sale or trade anything which he desires to sell, purchase or exchange.

ANNOUNCING A NEW CLASSIFIED ADVERTISING RATE

Commencing with the September, 1920, number, the rate on Classified Ads will be twelve cents a word.

During the past few months the problems of the publisher have multiplied at an alarming rate. Expenses have increased by leaps and bounds. Paper, the raw material of the publishing industry, has increased in cost until today it is almost four times as high as it was in 1914, and with still higher prices in view. Printing, the big labor item in the publishing business, art work, engravings, editorial contributions, office expenses and salaries, in short, everything that enters into the production of this magazine has very greatly increased in cost the past few months and with no assurance of a more stable condition in the immediate future.

HELP WANTED.

WANTED—Salesman and district manager this territory. Call on dealers with tires and accessories priced so low they sell on sight. Master Production Corp., South Bend, Ind.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

POSITION WANTED.

RELIABLE MAN, experienced thresherman, cook, wants job anywhere. Surber, 2912 Kensington, Kansas City, Mo.

WANTED—Position as traction engineer for coming threshing season, either gas, oil or steam. Chas. Spears, 414A E. 16th St., Kansas City, Mo.

WANTED—Position as engineer for coming threshing season. Running township engine at present. State particulars. Address S. R. Bond, Caldwell, Ohio.

WANTED—Position running steam tractor in West during fall threshing. Am experienced and reliable. Rees Keller, Georgetown, Ind.

POSITION WANTED—One engineer, one water hauler (brothers; wife of one will help cook), threshing with a steam outfit the coming season. Good references. J. Holmquist, 400 E. South St., Yates Center, Kans.

WANTED—Position in United States or Canada as separator man, engineer, or manager, or will operate rig on per cent. Will do repairing and upkeep. Long experience in Kansas, Iowa, Minnesota and Indiana. Competent, reliable. Box 15, Plainfield, Ind.

WANTED—Position as steam engineer this fall, North Dakota or Canada. Thoroughly experienced. Have run Baker, Case, Huber, Pitts, Frick. Twenty-nine years old. Good reference. State particulars and wages. Address W. A. V., care of The American Thresherman and Farm Power, Madison, Wis.

FOR SALE.

FOR SALE—40-60 five-plow tractor. J. E. Miller, R. 1, Iowa Falls, Ia.

FOR SALE—20-H. P. Baker engine. Fred Gloor, Kingsbury, Ind.

FOR SALE—Extension rims for 75-H. P. Case engine, water tank, pump and hose. Box 104, Overly, N. D.

FOR SALE—36x56 Nichols & Shepard separator, complete. Good condition. \$350. Ben Schneider, Lowpoint, Ill.

FOR SALE OR TRADE FOR LARGER machine—28x50 steel Case. Joseph Elkins, Edgewood, Ia.

FOR SALE—32x56 New Model Case separator; 33x54 Port Huron separator. John Eickhoff, Falls City, Nebr.

FOR SALE—Avery separator, 36x60, fully equipped, including Hart wings. Guy C. Long, Timber Lake, S. Dak.

FOR SALE OR TRADE—20-H. P. Advance; 36x60 Advance; 22-H. P. Huber, like new. E. D. Voorhees, Flora, Ind.

FOR SALE—McCormick shredder, eight-roll; good condition, ready for work. Hemery Miller, Hubbard, Iowa.

FOR SALE—One Heider tractor with automatic lift, three-bottom plow, in A-1 condition. J. H. Klesath, Dana, Ill.

FOR SALE—One Farmer Friend gearless wind stacker, in good condition. B. B. Cheesman, Alma Center, Wis.

FOR SALE—16-30 Eagle tractor, nearly new. Geo. M. Chapman, R. 7, Waukesha, Wis.

FOR SALE—Gears, traction wheels and engine from 15-H. P. Frick engine. Wheeler Bros., La Grange, Ky.

FOR SALE—Good Peoria weigher and one portable sawmill. Alvin H. Fasnacht, R. 4, Massillon, Ohio.

FOR SALE—20-H. P. New Style Rumely engine and sawmill. Will sell or trade. Chas. Shindler, Defiance, Ohio.

FOR SALE—One Big Four 30-60, nearly new. Wiggert Bros., Buffalo Lake, Minn.

FOR SALE—22-H. P. Gaar-Scott double; two 25 double Rumelys. Some smaller. Wm. Vandre, Mendota, Ill.

FOR SALE—Minneapolis 36x62 thresher, in good condition. S. E. Gullikson, Kimball, So. Dak.

FOR SALE—Nichols & Shepard separator, 40x60, A-1 condition. Price \$150. Theo. Weigle, Attica, Ind.

FOR SALE—New drive belt, four-ply, eight-inch, 150-foot. One adjustable sieve. Martin Masten, Kilbourn, Ill.

FOR SALE—Case steel feeder, 32-inch, in good condition. Price \$40. Arthur J. Froese, Reeseville, Wis.

FOR SALE—25-H. P. Baker engine; No. 5 Matchless clover huller, A-1 condition. E. O. Cromwell, McClure, Ohio.

FOR SALE—Peoria weigher; Peoria loader with cross conveyors, complete. Frooninckx Bros., Chebanse, Ill.

FOR SALE—18-H. P. Port Huron steam engine, fine shape, ready to run. Bargain. J. S. McCallum, Goldfield, Ia.

FOR SALE—Complete Rumely threshing outfit, ready for work, fine shape. H. H. Shafer, Manteno, Ill.

FOR SALE—New Case 15-27 tractor and plows, at a sacrifice. Write Box 78, Knapp, Wis.

FOR SALE—One Russell and one Case threshing outfit, complete, and clover huller. Henry Reesman, Burlington, Wis.

FOR SALE—Three steam outfits, plows, farm lands, cylinders rebored. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—No. 3 Mansfield huller, fully equipped, in good repair. \$400. Earl Zeigler, Shiloh, Ohio.

FOR SALE—Dixie magnetos, like new; \$20 while they last. D. W. Newhouse, Kingston, Ohio.

FOR SALE—12-25 Waterloo Boy tractor, in good condition. \$325. Joe J. Blais, Watertown, S. Dak.

FOR SALE—Five-plow Avery outfit, complete and in very good condition. Plow, \$300; tractor, \$1,000. E. R. Vehrs, Nekoosa, Wis.

FOR SALE—Two threshing rigs, one oil and the other steam. Both good size and in running order. Offered at before war prices. Ed Brass, Petersburg, Ill.

FOR SALE—One Birdsell huller No. 6, used three falls. Not threshed over one thousand bushels; \$600. Otto A. Hanne-man, Edgar, Wis.

FOR SALE—One first-class feedmill, doing good business. For particulars, write T. H. Boeckman, Ossian, Ia.

FOR SALE—Cider mill, Boomer & Boochart, fully equipped, cheap if sold at once. H. O. Johnson, Losantville, Ind.

FOR SALE—Large size Nall pneumatic grain elevator. Jesse O. Grant, Defiance, Ohio.

FOR SALE—16-H. P. Huber, \$500; Case 24-42 complete, \$400; Rumely huller, \$400. Louis Reasner, Rose City, Mich.

FOR SALE—One Minneapolis separator, 36x62, complete; in good running order. John Thiedermann, Leroy, Minn.

FOR SALE—60-H. P. Case steam engine; Batavia thresher; Little Pitts thresher; Westinghouse thresher. All in good condition. Harry P. Kellogg, Nunda, N. Y.

FOR SALE—24-45 Rumely OilPull tractor and 36x60 Rumely Ideal separator. All in fine condition. A bargain. Geo. C. Smith, R. 1, Emmetsburg, Ia.

FOR SALE—Cushman 4-H. P. binder engine on skids, brackets for binder, first-class condition. \$100 takes it. Guy C. Long, Timber Lake, So. Dak.

FOR SALE—10-H. P. Case steam tractor; 23x36 Aultman & Taylor separator, good shape. Price right. Owen Todd, Myron, Ark.

FOR SALE—One 10-20 Ingeco kerosene tractor, used only two hours as demonstrator. Will sell at bargain price. Address Petersen Impl. Co., Red Bud, Ill.

FOR SALE—One 20-40 Avery tractor with four-bottom Oliver plow and saw rig. Used but little. All for \$800. Wm. Behrnt & Son, St. Peter, Ill.

FOR SALE—50-H. P. Case steam engine; 32x54 Case separator with 150-foot, eight-inch belt, twelve-barrel tank. Chas. H. Petersen, R. 1, Libertyville, Ill.

FOR SALE—Garden City wings, complete with attachments for 36-inch Garden City feeder. Price \$50. Gamber Bros., Carpenter, So. Dak.

FOR SALE—Carpenter wing feeder for 27x46 Russell. Used ten days. Territory too rough here. Price \$110 f. o. b. car. Bradford Bros., Elkhead, Ore.

FOR SALE—One 15-horse Case engine in good running order, ready to go to work. Have no use for it. \$400. Wm. Winters, Scotia, Nebr.

FOR SALE—40x62 steel Case separator with blower, weigher, Ruth feeder, with Hart Brown wings. Chester Johnson, Storden, Minn.

FOR SALE—One new Marseilles six-hole corn sheller and drags, and one four-hole Keystone sheller and drags. Will take two-hole sheller with self feed in trade. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—Threshing Outfit: 25-H. P. double Buffalo Pitts engine; 34x56 Rumely Ideal separator, run four falls. Cheap for cash. \$2,300. Apply Otto A. Hanneman, Edgar, Wis.

FOR SALE—One Flour City tractor, in perfect condition and used but little. A great bargain for cash. Have quit threshing. Write or see Henry Walter, Slayton, Minn.

FOR SALE—22x36 Avery separator with clover attachment; 18-H. P. Nichols & Shepard steam engine; 32x52 separator; in good running order. R. B. Heck, Falls City, Nebr.

FOR SALE—75-H. P. Case engine and 33x56 Baker separator. Each used about twenty-five days. As good as new. Sell right. A. C. Stohler, 201 W. Maine St., Danville, Ill.

FOR SALE—One Ottawa gasoline drag saw. Price \$100. One U. S. army tent. Price \$20. One Morris two-inch beading tool, \$15. Fred Maxwell, R. 4, Linneus, Mo.

FOR SALE OR TRADE—Emerson fourteen disc plow, \$25; 36x60 Nichols & Shepard wood frame separator, \$500; 36-inch Ruth feeder, good as new, \$200. Frank Silvester, Little River, Kans.

FOR SALE—Two drive pulleys for twenty-bar Case, 13½ and 15 inch diameter, two-inch roller expander. Wanted—32-inch Case feeder. James Bros., Prescott, Ia.

FOR SALE—Advance Rumely outfit; 20 H. P. engine, new 1918; 36x60 separator, new 1919, new tank. \$3,000. Clarence C. Kelley, Mishawaka, Ind.

FOR SALE—Case 65-H. P. steam engine contractor fuel bunker, new 1919, No. 34608. Guaranteed as good as new. Will Schneider, Hinckley, Minn.

FOR SALE—20-40 Case tractor, in fine condition; 32x54 Case separator, complete, in good shape. Price \$2,000, cash. Write J. C. Warner, Havana, Ill.

FOR SALE—Case 32x54 steel thresher with gearless blower, or would trade for an eight-roll shredder. Everett Dyer, R. 3, Russell, Ia.

FOR SALE—One complete Rumely threshing outfit; 36x60 separator, 26-H. P. engine, run one year, one 50-H. P. Case engine. Charlie Cooke, Cleveland, Minn.

FOR SALE—A 33x56 Reeves Kansas Special separator in good shape. Want to buy a three head block sawmill carriage. Edward Munich, Chippewa Falls, Wis.

FOR SALE—One 8-H. P. Cushman engine, in good running order, with attachments, to use on a hay press. Edward Hartman, Valley Center, Kans.

FOR SALE—Two Birdsell clover hullers, one No. 1, one No. 6, with feeder and blowers. Good order. Cheap if sold at once. J. W. Norwell, Perryville, Ky.

FOR SALE OR TRADE FOR CAR—12-25 International tractor, type D throttling governor, kerosene burner. Wm. Bahr, Doylestown, Wis.

FOR SALE—25-H. P. Nichols & Shepard steam engine; 40x60 Nichols & Shepard separator. In good shape. Julius Johnson, Walnut Grove, Minn.

FOR SALE—One Avery undermounted engine, 22-H. P. double; one Avery separator, 36x70, drive belt and tank. All like new. Wm. H. Irie, Thomasboro, Ill.

FOR SALE—Set of gears for 22-H. P. undermounted Avery engine, good as new, at half price. Box 465, Bloomington, Ill.

FOR SALE—One Russell engine, 25-H. P.; one Russell separator, 33x54. This rig is ready for the field. Price \$1,500. Wm. Gildenmeister, R. 7, Bellevue, Ohio.

FOR SALE—30-H. P. Buffalo Pitts engine and 38x62 Pitts separator in good shape, fully equipped. Ericson Bros. & Lerud, Sacred Heart, Minn.

FOR SALE—18-H. P. Minneapolis engine; 44x62 Minneapolis separator, in good condition. Cheap. Geo. E. Timberlake, Woodhull, Ill.

FOR SALE—24x46 Wood separator, run part of one season; 12-20 Heider, run one season; ready to go to work. Priced to sell. Montz Bros., R. 3, Cameron, Mo.

FOR SALE—25-H. P. Huber engine; 40x60 Nichols & Shepard. Fully equipped, ready to run. Will sell separate. Box 176, Seneca, So. Dak.

FOR SALE—One 12-20 Heider and three-bottom Rock Island plow, used one day. Price \$1,500. H. A. Reinhart & Co., Kentland, Ind.

FOR SALE—One Russell 18-H. P. steam engine; one Case 36x58 separator, cheap at \$1,500, good running shape. Edgar A. Wolf, Morristown, Minn.

FOR SALE—22-H. P. double Gaar-Scott engine, refueled, and 36x58 steel Case separator, in good repair. Robert Wirz, Sawyer, Nebr.

FOR SALE—Cheap. 18-H. P. return flue Northwest engine, in good condition, refueled last fall. Dr. A. E. Peter, Barrett, Minn.

FOR SALE—Red River Special outfit. 20-H. P. engine; 36-inch separator. Best of condition. \$2,000. Engine alone worth more. Chas. E. Mogle, McComb, Ohio.

FOR SALE—One 18-35 Rumely tractor and four automatic lift plows. Run six months, guaranteed perfect. Price, \$1,300. Reason for selling, quit farming. Elmer Anderson, Cokato, Minn.

FOR SALE—One 50-H. P. Case steam engine; 32x54 separator, weigher, feeder, Sattley stacker, water tank, drive belt. Complete outfit, in good shape. Henry Schmidt, Hales Corners, Wis.

FOR SALE—36x60 Avery separator, complete, \$375; 25-H. P. Huber engine, \$50. Will answer any questions. Box 14, Overly, N. Dak.

FOR SALE—8½x10 Frick traction cab, plow hitch, side tanks, oil pump, steam pump, nearly new. H. R. Little, Gordon, Wis.

FOR SALE—16-H. P. Gaar-Scott steam engine, 31x49 Gaar-Scott separator; in good condition. For immediate sale, \$1,250. S. E. Hutton, R. 1, Cameron, Mo.

FOR SALE—One Nichols & Shepard outfit, 20-H. P. engine and 36x56 separator. Priced right, nearly new. Frank Cox, Jewett, Ill.

FOR SALE—One two-cylinder 15x30 Huber engine. Cheap if taken soon. In first-class shape. W. L. Vought, R. 1, Ingham Lake, Minn.

FOR SALE—Six-bottom independent beam hand-lift fourteen-inch plow, just new. Price \$150. Wm. Steuck, Pringlar, Ia.

FOR SALE—40x60 Nichols & Shepard separator, Garden City wing feeder, rebuilt, repainted. 35-70 tractor. Sell separately. Box 582, Fulda, Minn.

FOR SALE—Rumely clover huller, A-1 condition, price reasonable. Reason for selling, going out of business. V. L. Conkn, Ashley, Ohio.

FOR SALE—Large stock of rebuilt steam engines, separators, and tractors. We have what you want. J. O. Frish & Co., Fond du Lac, Wis.

FOR SALE—One 12-20 E-B tractor, Model AA; used very little. Address L. S., care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—25-H. P. Minneapolis return flue engine, late model; in fine shape; \$650 cash. A real bargain if sold soon. Thomas J. Smith, Rose Creek, Minn.

FOR SALE OR TRADE FOR LAND—40-H. P. Peerless Special heavy duty locomotive plow engine and Emerson gang plow, in first-class condition; a bargain. Frank Bland, Annada, Mo.

FOR SALE OR TRADE—Two 25-double Rumely engines; 22-double and 18-Gaar-Scotts; 16-Heilman; 36x60 Ideal Rumely separator; 44x62 Minneapolis. Want 36x56. Wm. Vandred, Mendota, Ill.

FOR SALE—18-35 Titan tractor and drive belt, \$950 cash or \$500 cash and \$500 note for six months. Would consider small touring car as part cash. L. H. Van Boezen, Woodstock, Ill.

FOR SALE—32x54 Huber. Would trade on 15-30 tractor, hay baler, clover huller, corn shredder or 16-H. P. engine. Want Ottawa sheller drags. H. Manliet, Kempton, Ill.

FOR SALE OR TRADE—One 15-45 Case steam traction engine; one 10-20 Titan kerosene tractor; one 10-20 Case tractor. Will sell for cash or accept livestock. Wm. Hansen Auto Co., Dixon, Ia.

FOR SALE—One 20-40 OilPull, new; Rumely Ideal 32x52 separator, used one year; also a Russell No. 2 portable sawmill. Address S. J. Schauer, R. 6, Waukesha, Wis.

FOR SALE—Advance Rumely engine, 20-H. P.; 32x52 Nichols & Shepard separator, steel tank, twenty-foot extension feeder. In good condition, prices right. Geo. Ansterburg, Homer, Mich.

FOR SALE—Five steam engines, three oil tractors, 16, 30 and 45, four clover hullers, four grain threshers, one Eli hay press. For sale very cheap; are going out of business. McCord Bros., Sherwood, Ohio.

FOR SALE—22-44 Nichols & Shepard oil-gas tractor, run less than thirty days since purchased last spring. Owner sold farm. Reason for selling. Price right. Box 155, Powell, Wyo.

FOR SALE—20-H. P. Minneapolis steam engine, Rumely Ideal separator, two McCormick huskers, one eight-roll, one ten-roll, and tank; all good as new. Robt. R. Unger, R. 3, Lewisburg, Ohio.

FOR SALE—36x58 Case separator No. 82870; 75-H. P. Case steam engine No. 2759, with extra bunker. All bought new in July, 1919. Threshed forty-six days. Cost new, \$6,000. Sacrifice at \$4,000 cash. Livingston, Nebraska City, Nebr.

FOR SALE—36x56 Racine thresher with wind stacker, Peoria loader, Ruth feeder with Hart Brown wing feeds. Bargain price, \$350. Otto Kleeman, Breda, Iowa.

FOR SALE—At real bargain prices—22-H. P. Avery undermounted engine; 30-60 Hart-Parr tractor; 40x63 Reeves thresher, feeder, wind stacker and weigher. Russell & Co., Peoria, Ill.

FOR SALE—One J. I. Case galvanized separator, 32x54, feeder, weigher and wind stacker. Run two seasons. Also Ohio hay press. John Renner, R. 4, Hilliard, Ohio.

FOR SALE—20-H. P. Aultman & Taylor engine and 36x60 Russell separator; No. 15 Reeves corn sheller, A-1 condition. Price \$2,500. E. W. Rentmeister, Mt. Pulaski, Ill.

FOR SALE—40x64 Pitts separator, complete, good order. Five-bottom fourteen inch P & O plow, good shape. Want ten-bottom disc gang. Chas. P. Norton, St. Charles, Mo.

WIND STACKER FOR SALE—Farmers' Friend wind stacker and grain saver. Used for but seventy-five acres. Is now on a 32x52 separator. Price \$100. Vasey Bros., Collins, Iowa.

FOR SALE—20-H. P. double cylinder engine; 36x60 Frick separator with attachment; one twelve-barrel tank; one Frick sawmill with two 54-inch saws. J. R. Funk, Duncan, Okla.

FOR SALE—One 16-H. P. Case engine; one 32x54 Case separator; also a 36x60 Avery separator. Case machine, run only five short seasons. Priced right if taken at once. Glenn Debord, Aledo, Ill.

FOR SALE—Nichols & Shepard threshing machine, 36x56, Ruth feeder attached; machine and belts like new. Used on a small run four seasons. V. E. Beedy, Manteno, Ill.

FOR SALE—Complete steam threshing outfit. 20-H. P. double cylinder Huber; 36x60 Avery separator, feeder and wind stacker, tank, tank pump, drive belt. W. H. Hoelscher, Hubbard, Ia.

FOR SALE—One Case 20-60 steam tractor; one 36x58 Case steel separator with stacker, steel water wagon, and, in fact, a complete threshing outfit at a bargain. Otto E. Scherer & Son, Palmyra, Wis.

FOR SALE—Rumely OilPull 15-30 tractor; 32x52 Advance Rumely separator, run one season; Smalley silo filler; Moline four-bottom plow. Carl W. Sauer, Basco, Wis.

FOR SALE—Five steam engines, three oil tractors 16, 30 and 45, four clover hullers, four grain threshers, one Eli hay press. For sale very cheap; are going out of business. McCord Bros., Sherwood, Ohio.

FOR SALE—Pitts Niagara Second separator, 32x54, in good condition, complete with Garden City feeder, blower, weigher, Caswell guide, Rockwood pulley. Price \$350. Theo. Sillman, Ladysmith, Wis.

FOR SALE—New 24-H. P. Minneapolis engine, half cash; sawmill, edger, three saws, belting, complete. Capacity fifteen thousand. A money maker. Cheap for cash. Get busy or you will be late. Frank Gerard, Ellson, Minn.

FOR SALE—Two 16-H. P. and one 14-H. P. Advance engines, thoroughly rebuilt, splendid condition. One 32x52 Advance separator, rebuilt and new belts. One 28x50 steel Case separator. Buckingham & Brubaker, Prairie City, Ia.

FOR SALE—15-30 International kerosene tractor in A-1 shape; will guarantee the tractor to run and develop same power as any new 15-30 kerosene tractor. Price \$500. Good reason for selling. Oscar Rude, R. 2, Madison, Wis.

FOR SALE—Steam engines and separators. Avery 40-80 and 30-60 Rumely; also 30-60 Aultman & Taylor tractors. Small separators and tractors for threshing, secondhand. Write your wants. Advance shredder, good as new. L. D. Thorp, 214 Palace St., Aurora, Ill.

FOR SALE—22 and 30 Wood Bros.; 30 double Rumely plowing engines, good as new; 18 Huber; 15 Advance; 16 Port Huron; Heider tractor; 36x58 and 40x62 Wood Bros.; 28x50, 32x54, 36x58 Case separators; one Monitor well boring outfit. James Burrier, Cedar, Ia.

FOR SALE—18-40 Rumely engine, Avery oil tank and wagon, six-bottom J. I. Case plow, Dain power hay press. All in good running order. Will sell right for cash. J. M. Whitcomb, Redwood Falls, Minn.

FOR SALE—18-H. P. double Buffalo Pitts, \$600; 18-H. P. compound Port Huron, \$400; 16-H. P. compound Russell, \$300; 32x52 Rumely separator, \$500. Machinery in good condition. Ralph Golden, Angola, Ind.

FOR SALE—Complete outfit. 30-60 Rumely OilPull; separator with all attachments; fifteen-barrel kerosene tank, drive belt. Good running order. Price right. L. M. Brown, R. 1, Williamsport, Ohio.

FOR SALE OR TRADE—Titan 25 actual H. P.; Peerless 18-H. P.; J. I. Case 18-H. P. Used injectors, steam pump, safety valves. 4- and 2- and 3-H. P. portable gasoline engines. J. N. Britz, 148 S. La Salle St., Aurora, Ill.

FOR SALE—One Rumely OilPull 16-30, run ten days; one Rumely separator, 28x48, feeder, weigher and wind stacker. Run thirty-five days. Price \$2,000. All in A-1 shape. Jackson Furlon, Mulkeytown, Ill.

FOR SALE—40-80 Avery tractor; 36x60 Avery separator, complete, run one season; 18-H. P. Avery undermounted steamer; 32x54 Avery separator; 10-20 Titan tractor and three-bottom Janesville plow. J. B. Clardy, Greenfield, Ill.

FOR SALE—10-20 Titan tractor; 20-inch Racine separator, complete, nearly new; 20-H. P. Avery steam engine; 36x60 Avery separator; 16-H. P. Case steam engine; Get our prices. Indiana Parrett Tractor Co., 46 Kentucky Ave., Indianapolis, Ind.

FOR SALE—One 16-H. P. Avery return flue engine, just rebuilt and repainted; looks like new, and one 32x52 Avery separator with weigher, feeder and wind stacker, complete outfit. Geo. J. Kramer, Stout, Ia.

FOR SALE OR TRADE FOR SMALL SEPARATOR OR TRACTOR—Ann Arbor baler; 6-H. P. gas engine, feed grinder, corn sheller, sorghum evaporator and furnace. Henry E. Black, Danville, Ohio.

FOR SALE—Case 45-H. P. steam engine, used four seasons, good as new; Heider 12-20 tractor; Case 26x46 separator, used two seasons; Ruth 32-inch feeder; Peoria weigher. If you want a bargain, I've got it. A. J. Kleinjan, Durant, Ia.

FOR SALE—36x56 Advance shaker separator with feeder, Dakota weigher and wind stacker, full set of belts, \$400. Advance eight-roll husker, cheap. Machinery always shedded. Davis Bros., R. 26, Box 34, Beloit, Wis.

FOR SALE—20-H. P. Advance engine; one 32x52 Advance Rumely separator, new; one No. 6 Birdsell huller; one eight-roll Advance shredder; one tank and wagon. All in good working condition. Henry L. Becker, Rochester, Ind.

FOR SALE—Flour City 30-50 tractor, practically new, used sixty-five days threshing, half cost price; Moline Universal, two cylinder tractor and plows; Phoenix two-ton truck. Lawrence Jones, Springfield, So. Dak.

FOR SALE—One 16-H. P. Russell engine, full jacket boiler, canopy top; one 30x46 Russell grain separator, complete; one steel water tank; 150-foot, seven-inch drive belt. Carl Young, R. 2, Spring Lake, Mich.

FOR SALE OR TRADE—50-H. P. Case steam engine, good as new; 32x54 Case steel separator, Garden City feeder extension, 150-foot, nine-inch, five-ply drive belt. I have not the time to run this rig. Priced to sell. J. C. Copsey, Grant, Nebr.

FOR SALE—15-30 Aultman & Taylor engine with eight-inch rims. Has Climax motor, one four-bottom P & O engine plow, extra lays, one 295-gallon steel tank on wagon. Prices right. Engine at work but will sell. Address G. Crotzer, Box 115, Windom, Minn.

FOR SALE—One 20-H. P. Huber; one 22-H. P. Advance; one 22-H. P. undermounted Star with low cap and two wheel tender. Has been braced like the Avery; one No. 9 Birdsell huller; one 36x60 Ideal thresher. This machinery rebuilt and ready to run. Travis Bros., McNabb, Ill.

FOR SALE—20-40 Rumely OilPull; 36x60 Rumely separator; ten-roll McCormick corn shredder. All used only one season. Will sell all together or separate. Henry Waggoner & Son, 425 N. Barron St., Eaton, Ohio.

FOR SALE—Avery separator, 32x54, with feeder, weigher, blower, all belts, including good drive belt. Separator run one hundred thirty days. Is in fine shape. Price for quick sale, \$800, f. o. b. Chili, Wis. Ray Ure, Chili, Wis.

FOR SALE—One 15-H. P. Case; one 22-H. P. Minneapolis return flue; one 12-H. P. Case; one 32-inch steel Case; one 32 Red River Special; one 32 Avery; one 40 steel Case. Will trade for a 20-H. P. steam or larger. Wm. Seyb, Donnellson, Ia.

FOR SALE—One 28x40 Red River Junior separator, run two short seasons, like new; one 36x62 Baker separator, run four seasons. Built completely equipped, priced to sell. Harding & Kelsey, Lowell, Ind.

FOR SALE—30-60 Rumely OilPull tractor, and 36x60 Rumely Ideal separator, nearly new. Also twelve-barrel Rumely mounted steel fuel tank. Outfit is at Judith Gap, Montana. Fred L. Hay, Harvard, Ill.

FOR SALE—32x52 Red River Special separator, overhauled, repainted, new belts, \$600 f. o. b. 30x46 Red River Special separator, overhauled, repainted, new belts, \$600 f. o. b. Thorne Snyder, Fowlerville, Mich.

FOR SALE—20-H. P. double Rumely plow engine No. 6992; 40-80 Minneapolis tractor No. 1208; 36x60 Ideal separator; 36x60 Reeves separator. This machinery is in A-1 shape. W. J. Link, West Point, Ia.

FOR SALE—Complete threshing outfit consisting of one 36x60 separator, used two years; one 20-H. P. double Rumely engine, used seven years; one water tank, one new belt. Price \$2,500. Address John Wulf, R. 8, Valparaiso, Ind.

FOR SALE—One 16-H. P. Huber engine (traction); one new Frick threshing machine, 27x46, wind stacker, special self-feeder, practically new. One Ohio baler, 17x22. One 19, practically new. C. S. Evans, Maytown, Pa.

FOR SALE—Aultman Star engine and American separator repairs from original patterns. Orders promptly filled. Send for new repair price list. Engine & Machinery Company, Marion Ave. and Navarre Rd., S. W., Canton, Ohio.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—Avery 24x36 separator with swinging conveyor, wind stacker and feeder. This machine is new, having never been run. Price \$1,150 f. o. b. Ft. Wayne, Ind. Address Carryst Implement Co., Ft. Wayne, Ind.

FOR SALE—One 25-H. P. double Nichols & Shepard engine, 40x60 separator with new Garden City feeder, Minneapolis corn sheller, Minneapolis tank. All in A-1 condition, \$2,000. Clarence Martensen, Anchor, Ill.

FOR SALE—20-H. P. double Gaar-Scott engine and 36x60 Rumely Ideal separator; outfit four years old. Also 16-H. P. Stevens engine. All above in good running order. For further information write H. L. Smith, Manson, Iowa.

FOR SALE—One Reeves 20-H. P. cross compound engine and 33x56 Reeves separator, in running order, or might consider trade for 15-30 or 24-40 Rumely OilPull tractor. What have you? John Gyte, Black Earth, Wis.

FOR SALE—20-H. P. Rumely engine; 34x56 Rumely separator, feeder, weigher, blower and belts. Both in good running order. Two-ton Quad Nash truck, first-class shape; one sawmill. Will sell at bargain. Reason, on account of death. Mrs. Byron Riggs, Admr., Sullivan, Ind.

FOR SALE—30-H. P. double Minneapolis engine, with plow gears, run four seasons for threshing. In good condition. One 36x62 Minneapolis separator with wind stacker, weigher, Woods feeder. Will sell separate. C. Germundson, Elbow Lake, Minn.

FOR SALE—Hart-Parr 30-60, good as new; kerosene tractor, plow gear; one 10-20 Titan tractor in good running order, and in good shape; one almost new John Deere three-bottom, fourteen-inch tractor plow. H. W. Hoefelman, Platte Center, Nebr.

FOR SALE—One 25-45 Rumely tractor from OilPull tractor, perfect condition. One 32x56 Rumely Ideal separator. One six-bottom Oliver plow, two sets bottoms, breaker and stubble. Reason for sale, sold farm. \$2,500 cash takes complete outfit. Chester & Son, Valparaiso, Ind.

FOR SALE—25-horse Case engine, 34-horse Northwest engine, 30-horse Pitts engine, two Heider three-plow tractors, 36x60 Rumely Ideal separator, run twenty days, 32x54 steel Case separator, 36x60 Advance separator. All in good condition. A. C. Wehe, Lakota, N. Dak.

FOR SALE—Brother threshermen, you can save money by purchasing your Sawyer drive belts from us. We have a 36-inch Garden City feeder, run one year, at a bargain, also a few good secondhand engines and separators. Write for our list. Morris Machinery Co., Lincoln, Nebr.

FOR SALE—20-H. P. Case, 20 Advance, 20 Russell, 20 Peerless, 15 Case, 30-60 Aultman & Taylor tractor, late engine. 36x58 Case, 40x62 Case, 32x56 Advance. Machinery as good as new, rebuilt at bargain prices. C. A. Wiegner, Donnellson, Iowa.

FOR SALE—One 4x16 foot boiler with 32 four-inch flues; one 32x60 Avery separator, complete with blower, and self feeder; one Avery truck with body; one six-bottom John Deere plow. All stuff in good shape and will take a car in trade or cash. A. W. Kadera, Iowa City, Ia.

FOR SALE—Cash: One Buffalo Pitts engine, 30-H. P., double cylinder; one Nichols & Shepard Red River Special, complete rig, used only four years, good as new. All under roof, ready to take out without much repair. Ready for business. Address Hanson Studio, Montevideo, Minn.

FOR SALE—Five good steam engines, rebuilt, 12- to 22-H. P. Three threshers, one Birdsell clover huller, three tractors, two Hinman three-unit milking machines. Send for our bargain list of new and used machinery. The Greenfield Hardware & Supply Company, Greenfield, Ohio.

FOR SALE—One 25-H. P. double cylinder Rumely traction engine; one 40x60 Nichols & Shepard separator, complete with all attachments; one 14-25 Case gas tractor, low price; one 30-60 four-cylinder tractor. Write for prices. J. A. Cooper, 234-236 W. Maryland St., Indianapolis, Ind.

FOR SALE—One 21-H. P. Advance compound; one 18-H. P. Huber simple; one 40x64 Port Huron separator; one 33x56 Reeves separator; one 36x60 Huber separator. Four tractors—12-25 Avery; 12-25 Parrett; 12-25 All Work; 45 Mogul. Two shredders, one Sandwich baler. Paul F. Hassler, R. 9, Princeton, Ill.

FOR SALE—20-H. P. Canadian boiler Rumely engine; 34x56 Rumely separator, both run four short seasons, \$2,800; 16-H. P. Russell steam engine, \$300; 15-H. P. Rumely steam engine; 32x52 Rumely separator, both for \$700. This machinery is all in good running order. Clarence Bahl, R. 3, Dubuque, Ia.

FOR SALE—65-H. P. Case engine with eight-inch extension rims and Gould valve; 36x58 separator complete with blower; twenty-foot feeder extension, water tank, wagon and cook shack. Run about ninety days. In shed when not used. Also 58-inch drag stacker. Chas. Pontius, Hudson, Kans.

FOR SALE—60-H. P. Case engine No. 29164; 36x58 Case separator No. 63366; 50-H. P. Case No. 32876; 32x54 Case separator No. 69688; 32x54 Case separator No. 57785; 20-H. P. Huber engine No. 10412; 32x54 Huber separator No. 11970; 28x46 Minneapolis separator, Box 62, Norfolk, Nebr.

FOR SALE—One 36x62 Minneapolis Western Special No. 16112, equipped with Garden City feeder and Advance weigher, together with 150-foot, nine-inch, five-ply drive belt and canvas cover. Used only two seasons. I am quitting business and will sell reasonable and on a positive guarantee. Clyde Shultz, Union City, Ind.

FOR SALE—Threshing Rig: 16-horse Russell compound engine; twelve-barrel mounted tank, pump and hose; 28x48 Robinson separator, all attachments, new drive belt and cover. Splendid condition. \$1,600 cash. Also ten-roll Case husker, \$400. Positively no trades. Chas. Brown, Foster, Ohio.

FOR SALE—20-H. P. Nichols & Shepard double simple steam engine; 32x52 Red River Special separator, all ready to begin the season. No repairs needed, new belts and repainted. This outfit must be seen to be appreciated. \$2,500 f. o. b. Fowlerville, Mich. Terms to responsible parties. Thorne Snyder, Fowlerville, Mich.

FOR SALE—33x56 Gaar-Scott separator, four seasons; 30x50 Gaar-Scott separator; 32x54 Huber separator, run one season; eight-roll Maytag Success shredder, a real bargain at \$300; No. 1 Birdsell clover huller, \$100; sixteen-inch Rosenthal silo filler, \$250, a bargain. C. S. Frazee, 1620 F. Ave., New Castle, Ind.

FOR SALE—One 25-H. P. Nichols & Shepard engine in good shape. One 36x56 Minneapolis separator, fully equipped, Langdon feeder, wings and weigher. Run twenty-six days. Will sell separator alone or complete rig, including belt, tank and pump. Write for prices. Box 2, Wentworth, S. Dak.

FOR SALE—Port Huron engine, Avery separator, tanks complete, ready for field. Aultman-Taylor engine, good shape. Huber 36x60 separator, side blower, 36-inch Ruth feeder, Peoria weigher. Used parts for 36x56 Minneapolis separator; front sectional pans new. Albert Watts, Beaver Crossing, Nebr.

FOR SALE—One Minneapolis separator, size 36x56, run seven falls; equipped with Langdon feeder, Hart Brown wings, Peoria weigher with swinging cross conveyor; two 16-inch extension tires to slip over 36-inch wheels; one Finnegan stacker hood; one No Choke chaffer for 56-inch Minneapolis separator. Yahnke & Delmage, West Brook, Minn.

FOR SALE—Complete threshing rig, nearly new, first-class shape, ready to run. 75-H. P. Case engine with fuel bunkers, water tank, pump, hose, \$125 drive belt, one steel Wood Bros. 40x62 separator with wings and blower. Run eighty days, looks like new. Price \$2,300. A. H. Mienkel, 1028 Ninth Ave., S. E., Rochester, Minn.

FOR SALE CHEAP IF TAKEN AT ONCE—One 41x66 Niagara Second Pitts separator, wood frame. Plain separator without feeder or blower or weigher. New belts, grain pans, straw racks, shoe teeth, and newly painted, always shedded. Also one No. 12 Valentine grain elevator with truck complete. Used only two days. Please write me for prices if interested. Frank D. Morrill, Janesville, Wis.

FOR SALE—Some repairs for 30-60 International Mogul tractor as follows: Two connecting rod bearings No. 2001 3/4-T.A., two wrist pin bushings, one exhaust valve and spring, one intake valve spring, one set stationary and one set movable electrodes for igniters, also trips, one bull pinion. These parts are new, never been used. Will sell them cheap. Jiras Bros., Oxford, Ia.

FOR SALE—25-50 Avery, new in August, 1919, used about twenty-five days, good as new in every way. Price \$1,800 f. o. b. Shenandoah. I traded a new 40-80 for this 25-50. Have a 14-28 Avery, 1920 model, used two days, all right in every way and good as new, \$1,375, f. o. b. Shenandoah. I traded the party a larger engine to pull his ten-foot grader. T. W. Maxwell, Shenandoah, Ia.

FOR SALE—Avery 14-28 tractor, almost new, \$1,400. Avery 22-36 separator threshed 20,000 bushels wheat, \$750. Bates All Steel tractor, good running order, \$300. E. B. stone dodger four-bottom engine plow, \$200. 20-35 Avery tractor, good running order, \$450. John Deere combination horse and engine two-bottom twelve-inch plow, \$100. D. W. Newhouse, Kingston, Ohio.

FOR SALE—One 35-H. P. Minneapolis steam engine, has broken three hundred acres, threshed one fall; one 30-H. P. Avery undermounted, run less than sixty days, equipped with Detroit automatic oiler for all engine bearings, extension rims. These engines are in A-1 condition. Will consider Buick 6 or Cadillac 8, no later than 1916 model, as trade. Christ Christenson, Box 366, Baker, Mont.

FOR SALE—20-H. P. Advance engine, eight years old, well cared for, splendid engine; 36x56 Aultman & Taylor separator, well shedded and cared for; low price; two good secondhand return elevator raddles for Advance separator; new, never used, ash dump pan for Avery undermounted engine. Dan H. Ghare, Box 165, Arcola, Ill.

FOR SALE—One 8-16 Mogul tractor, new cylinders, piston rings. Engine in fine shape throughout. One 10-20 Mogul, extension rims, lugs, steering device. New fourteen-inch two-bottom Oliver self lift plow. Ten-inch International feed grinder. Six-roll McCormick Little Giant shredder. Belt, oil barrels. All ready for work. W. S. Lincoln, Orland, Ind.

FOR SALE—New Avery 40-80 at a bargain. New Case 15-27, only \$1,600. New Case 9-18, only \$1,100. Used Case 10-20, only \$400. All Work, 12-25, slightly used, \$800. Case 20-40, rebuilt, like new, \$1,500. Big Four, fine shape, \$1,300. New Ford Stauder Mak-a-tractor, only \$100. Rystrom Impl. Co., Stromsburg, Nebr.

FOR SALE—30-60 Aultman & Taylor tractor, extra good order except paint; 36-inch Minneapolis separator, late machine, paint good as new, never been wet; one crank shaft for 25-H. P. Case engine without disc; one main casting body for C size Marsh steam pump; belt wheels, and casting and shafting and many repairs for Advance separator. Secondhand, most as good as new. Dan H. Ghare, Arcola, Ill.

FOR SALE—Twenty-five hundred feet of lightning rods, including three dozen each long and short tops, four dozen glass balls, eight weather-vanes, and other supplies for complete rodding outfits, round and ribbon copper cables. Will sell at cost in parts or complete outfits. Send measurements and advise what you need. Maurice A. Park, 1114 East Johnson St., Madison, Wis.

FOR SALE—One 20-H. P. Rumely single; one 22-H. P. Robinson; one 33x56 Robinson separator; one 36x56 Minneapolis separator; one 32x54 Avery separator; one 36x56 Advance separator; one 33x56 Gaar-Scott separator. These machines are all in good shape and the price right. One 20-H. P. double Gaar-Scott, one 32-inch Advance separator, one Rumely Special clover huller, one Maytag husker. Roy Vail, Clarksburg, Ind.

FOR SALE—Illinois Special separator; 36x62 Heineke feeder; Hart belt and bucket weigher; gearless stacker, five years old; 24x36 canvas cover, two years old; 150-foot, eight-inch, four-ply belt, one year old. A bargain, \$400; one 12-25 Avery tractor with pilot guide, three fourteen-inch bottom Grand Detour plow, new, plowed eight acres in demonstration. Price, \$1,220 if taken at once. Box 68, Sorento, Ill.

FARM FOR SALE—Four hundred acres good land in Clay County, Kansas. 180 acres of wheat, 8 acres alfalfa, 14 acres hay, meadow pastures, one 40 acres, one 37 acres. The rest in corn, oats. Two sets of improvements, two wind mills. On two mail routes. This 400 acres is all in one block. Some bottom land and some upland. Can be divided to suit buyer. All crops looking fine. Ed Broden, Morganville, Kans.

FOR SALE—Engines: One 18-H. P. d. c.; one 18-H. P. s. c. Gaar-Scott; one 20-H. P. d. c. Rumely; one 16-H. P. Huber; one 30-H. P. undermounted d. c. Avery. Separators: One 32x56 Minneapolis; one 33x50 Peerless; one 33x50 Russell; one 33x52 Gaar-Scott, fully equipped. One No. 1 Birdsell huller; one 16x18 Ohio power hay baler; one eight-roll Advance; one eight-roll Appleton; one six-roll McCormick huskers, all good. The Dafler-Moser Co., Richmond, Ind.

FOR SALE—We have one 26-H. P. double Minneapolis steam engine, plow gear, secondhand, refueled and in good shape; one 45-H. P. two cylinder Titan, good as new; one Aultman & Taylor 36x56 separator rebuilt, equipped with Ruth feeder, wind stacker and weigher, \$1,000; one water tank, mounted, \$125; two secondhand 34x56 Buffalo Pitts separators, \$500 each; one 8-16 Mogul tractor, \$325; one 12-25 Heider, \$400; one 10-20 Mogul, new, with steering device and lugs, \$1,000; one six-bottom Independent lever lift P & O fourteen-inch engine plow, \$350. If interested, write E. Sundgren Hardware Co., Falun, Kans.

FOR RENT—640 acres splendid grazing lands, well watered and well fenced. Will pasture three hundred head of cattle. Will furnish this pasture six months, salt the cattle and look after them for \$3,600. B. B. Clarke, Madison, Wis.

FOR SALE—Thirty-three steam engines thoroughly rebuilt—Avery, Case, Advance, Minneapolis, Port Huron, Geiser, Buffalo Pitts, Nichols & Shepard, Russell. Eight gas tractors—three Reeves 40-11 P., one Case 30, one Flour City 30, one Avery 12. These tractors are very suitable for road grading. New and rebuilt separators. New belts and weighers. Write for sizes wanted. We consider trades. Burkhardt, Baldwin & Green, Sioux Falls, So. Dak.

FOR SALE—Aultman & Taylor 18-36 oil tractor, perfect condition, run forty days. Price \$2,200. New Avery 28x46 grain separator, fully equipped. Used only fifteen days, perfect condition. Cost \$1,600; sacrificed at \$1,150 in cash. Five-bottom Avery independent beam plow with extra shares. Price \$250. New Avery brush plow, twenty-four-inch, never used. Has extra side draft hitch. Cost \$325. Sacrificed at \$225. J. Livingston, Nebraska City, Nebr.

FOR SALE—One 20-H. P. Buffalo Pitts Special steam engine; one 60-H. P. Case; one 22-H. P. Advance; one 20-H. P. Port Huron; two 32x54-inch Case steel separators; one 32x54 Rumely separator; one 33-inch cylinder Port Huron separator; two large hullers. I have two separators that would be good machines for someone to rebuild. The above machinery is all good machinery and ready to thresh grain. Some of it was bought new three years ago. S. E. Scheer, Stryker, O.

FOR SALE—One 18-H. P. Peerless engine; one 18-H. P. Huber engine; one 16-H. P. Huber engine; one 33x56 Reeves separator with Langdon feeder; one 36x60 New Huber separator; have been in use one season, good as new; one 36x60 Red River Special separator; one 36-40 cylinder Peerless clover huller; one four-ply eight-inch Gandy belt, 135-foot, in a very fine shape. Have been in use less than two days. This machinery is all guaranteed to be in first-class running order. Maurice A. Volz, Morris, Ind.

FOR SALE—Two 50-H. P. Case engines with C. F. B. and cab; one 14-H. P. Advance; one 16-H. P. Huber; one 13-H. P. Gaar-Scott; one 18-H. P. Frick. These engines are all rebuilt, striped and varnished, guaranteed as new. Two 40-inch Case separators; two 32-inch Averys four 28-inch Case; one 28-inch Racine; one 31-inch Gaar-Scott; two 32-inch Case; one 30-inch Port Huron. These machines are rebuilt, with all good belts, repainted striped and varnished. Guaranteed as new. Clyde R. Gates Machinery Co., Church and Ransom Sts., Ottumwa, Iowa.

FOR SALE OR TRADE—36x60 Avery rebuilt, \$1,200. 36x60 Avery, \$550. 15-H. P. Case compound, rebuilt, \$1,200. 16-H. P. Gaar-Scott, extra good, \$800. 18-H. P. d. c. Buffalo Pitts, \$1,350. 13-H. P. Russell, \$450. 22-H. P. return flue Avery, \$550. 36x58 steel Case, \$700. 36x58 wood Case, \$450. Birdsell No. 6, \$350. Several outfits listed, good ones. 2A Western sheller, not worn, \$400. New 4-in-1 hood, \$24. New Gardner weigher, \$90. When I rebuild a machine I make it as good as new because I strengthen all weak points and replace all worn parts. Come and see. My work will prove the above statement. I also rebuild by hour or by contract. Frank Nelson, North Henderson, Ill.

FOR SALE—New 40-80 Avery tractor, used eight days, \$3,400; new 15-27 Case tractor, fall 1919 model, \$1,500; new 9-18 Case tractor, \$1,200; secondhand 10-20 Case, \$400; slightly used All Work 12-24 \$800; 20-40 rebuilt Case tractor, \$1,400. 20-H. P. Case steam engine, rebuilt, in fine condition, \$1,600; 25-H. P. Case steam engine, good condition, \$1,800; 20-H. P. Case steam engine to be rebuilt; 19-H. P. Minneapolis rebuilt compound return flue, \$1,400; 16-H. P. Huber, fine condition, \$700; 18-H. P. Westinghouse, will be put in good condition, \$600; 20-H. P. Avery return flue, late engine, excellent condition, \$1,200; 36x58 Case separator, new feeder, \$1,300; 36x58 Case separator, wood frame, \$9300; 36x56 Aultman & Taylor gear blower complete, \$300. 36x58 Aultman & Taylor gearless blower, \$450; 28x48 Avery, in good condition, \$700; 24x42 steel Case rebuilt, \$800; 24x42 Huber, in good condition, \$600. Rystrom Implement Co., Stromsburg, Nebr.

FOR SALE—One 32x54 Avery separator, run one year, threshed ten thousand bushels wheat, in A-1 shape, Peoria separator and bagger; one 20-H. P. Peerless action engine, double geared, high pressure boiler, 24-inch traction wheels, 250-gallon water tank; run seven years, in A-1 shape; one fifteen barrel water tank used one season, mounted on new wagon and in A-1 shape. Price \$2,000, complete. W. L. Rodie, Gracey, Ky.

MISCELLANEOUS.

WANTED—Power cane mill, about 5-horse. Wheeler Bros., La Grange, Ky.

WANTED—Flywheel for 30-60 Mogul. Al Schumann, Belle Plaine, Minn.

WANTED—Weigher and swinging conveyor. State condition and price. Chas. Torton, St. Charles, Mo.

WANTED—Extension rims for Reeves tractor, 40-65. H. W. Hoefelman, Platte Center, Nebr.

WANTED—One gang to fit John Deere eight-bottom plow, lever lift. A. G. Kirschner, Haigler, Nebr.

WANTED—Extension rims for Reeves 20-horse steam engine. Wm. Symons, Heridan, Wyo.

WANTED—32-inch separator of late model, Case preferred. Paul Gourthy, Route B, St. Francis, Kans.

OPPORTUNITIES FOR THRESHERMEN—North Dakota and Canada farm lands for sale or exchange. Reply to Lawrence N. Sands, Grafton, N. Dak.

WANTED—Extension plowing guide for largest size tractor. Hugh Haskim, Oldham, S. Dak.

BELTS COST MONEY—Have your canvas threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

WANTED—For Hart-Parr 30-60, pulleys, friction disc and spider. Must be in perfect condition. A. G. Kirschner, Haigler, Nebr.

WANTED—Small portable sawmill, edger, cut-off saw, power blacksmith outfit. State make, condition, price. Frederick MacLaren, Ellsburg, Minn.

EXCHANGE—Ford runabout, two years old, good tires, for 16-H. P. traction engine. Nichols & Shepard Co., Madison, Wis.

WANTED FOR CASH—11- or 12-inch trench excavator. State condition, age, and lowest price. Silas Quick, Piper City, Ill.

SHAWNEE, Oklahoma, center of a great farming country. Write for free agricultural booklet. Board of Commerce, Shawnee, Okla.

WANTED—To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

WANTED—Small silo filler; prefer No. 9 Blizzard or Papec. Also a two- or four-roll corn husker. Colby & Spitler Co., Hart, Mich.

FEED MILLS—\$20 for an all-steel eight-inch burr mill. Other sizes not available. These are real bargains. Harris Machinery Company, Minneapolis, Minn.

WANTED—Low weigher with cross conveyor, adjustable sieve and conveyor for 40x62 separator. Also steel water tank. P. C. Forgard, Lake Preston, S. Dak.

WANTED—Used Case engine 25-H. P. not older than No. 14000. Must be good enough to repair or be used for repairs to another engine. Box 343, Mandan, N. Dak.

BOILER TUBES—BOILER TUBES—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

NEW SELF FEEDERS AND WEIGHERS—At special reduced prices to clean out surplus stock. Two Perfection Dakota style weighers at \$90 each; one 28-inch Pitts steel feeder; seven 32-inch Pitts steel feeders; one 32-inch Pitts steel Universal feeder; three 36-inch Pitts steel Universal feeders; one 40-inch Pitts steel Universal feeder; one 32-inch Langdon feeder; all at \$150 each. Also two fourteen-foot extension carriers for 28-inch feeders at \$40 each; also one eighteen-foot, two piece common stacker for 48-inch wide separator at \$50. All were built and are complete with attachments to fit Pitts steel frame Niagara No. 2 separators but can also be fitted to any other make. For sale by Wagner-Langemo Co., 418 First St., North, Minneapolis, Minn.

WANTED—Fordson tractor, '19 model; 1,200 feet three-fourths-inch best grade gas pipe. All must be cheap price. Christopher Skaggs, Box 94, Oakford, Ill.

WE SPICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebore cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

BARGAIN SALE—On 30 ounce duck canvas endless threshing belts, thirty days only, cash with order. All belts are first grade new belts and warranted by the manufacturer. 150-foot, eight-inch, five-ply, \$122; 150-foot, eight-inch, four-ply, \$95; 125-foot, eight-inch, four-ply, \$81; 125-foot, seven-inch, four-ply, \$72; 100-foot, seven-inch, four-ply, \$60; 100-foot, six-inch, four-ply, \$52; 75-foot, six-inch, four-ply, \$40. Order now as this is your last chance at this price this year. Economy Supply Co., 229 S. Water St., Peoria, Ill.

BARGAIN SALE—On rubber endless threshing belts, for thirty days only. Cash with order. First draft or postoffice money order takes these belts. First grade new belts. Griptite Brand—three 125-foot eight-inch, four-ply, \$100 each; six 100-foot, seven-inch, four-ply, \$78 each. Gulf Rubber Brand—three 125-foot, eight-inch, four-ply, \$83 each; two 100-foot, eight-inch, four-ply, \$60 each; three 75-foot, eight-inch, four-ply, \$50 each. Five Gardner double tube weighers to fit any make machine, \$95. Economy Supply Co., 229 S. Water St., Peoria, Ill.

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You Can't Afford to Pass Up.

Size	Plain Thread Casings	Non-Skid Casings	Grey Tubes
30x3	\$15.50	\$17.25	\$2.50
30x3 1/2	18.50	21.00	3.00
32x3 1/2	22.50	25.25	3.50
32x4	30.25	33.25	4.35
33x4	32.35	36.00	4.35
34x4	33.00	37.00	4.70
33x4 1/2	42.25	47.00	5.65
34x4 1/2	43.85	48.25	5.90
35x4 1/2	45.75	50.50	5.90

NOTE: We can furnish Cord Tires (both ribbed and non-skid) at an equally large saving to you.

All these tires are new fresh stock made and warranted by one of the oldest tire manufacturers and sold by dealers everywhere. Doring Sales Co., 623 E. Wilson St., Madison, Wis.

CASE STEAM TRACTOR 9x10—This outfit is in fine working order. Want to make a quick sale. Price \$850. Boiler and engines tested. Harris Machinery Co., Minneapolis, Minn.

ANVILS—Brand new all steel, 70 to 75 lbs. government surplus, all U. S. inspected and guaranteed. Highest grade. Bargain price \$14.50. Harris Machinery Co., Minneapolis, Minn.

SOME OF OUR REAL BARGAINS
150 ft. 8 in. 4 ply drive belts.....\$ 97.50
125 ft. 8 in. 4 ply drive belts..... 85.00
125 ft. 7 in. 4 ply drive belts..... 74.00
100 ft. 7 in. 4 ply drive belts..... 62.00
100 ft. 6 in. 4 ply drive belts..... 55.00
150 ft. 8 in. 5 ply drive belts..... 124.00
These are leading sizes. We can furnish any size you want. Belts are new, fresh stock of the very best quality, fully warranted and no better belt on the market at any price.

2 in. wire lined tank hose, foot...\$.60
1 in. hard rubber injector hose, foot .30
3/4 in. injectors..... 9.00
5 in. tank pump leathers..... .40
3-ton lifting jacks..... 7.50
6-ton lifting jacks..... 9.50
6 in. 4-ply rubber belting, foot... .50
5 in. 4-ply rubber belting, foot... .40
4 in. 4-ply rubber belting, foot... .36
Steam gauges..... 4.00
Best grade 2 in. boiler flues, foot.. .35
Oil pumps..... 12.00
2 in. flue cleaners..... .90
Tank pumps, double action, low down..... 12.50
Thresher covers, large size, made from 13 oz. close woven waterproofed duck..... 50.00
The above all new fresh stock of the very best quality.

3-bottom 14" Oliver automatic lift general purpose engine gang plow.....\$176.00
2-bottom 14" Oliver automatic lift general purpose engine gang plow..... 136.00
3-bottom 14" J. I. Case automatic general purpose engine gang plow..... 176.00

These plows have never been used and are new, fresh stock of the latest model but are a little shop worn from being used as samples.

We carry a complete line of thresher supplies of the very best grade and at prices that will save you money. Mail orders filled promptly.

We are state agents for the following well known machinery: Aultman & Taylor Machinery Co., Minneapolis Threshing Machine Co., Kardell Tractor and Truck Co. We have the largest line of second machinery in the middle west. Can save you money on anything that you need. Doring Sales Co., 623 E. Wilson St., Madison, Wisconsin.

WANTED—36-inch crank shaft feeder, Peerless blower for 56-inch Gaar-Scott separator. Birdsell Special feeder for No. 6. Head tank for 16- or 18-H. P. Gaar-Scott, also rocker grates. Will trade 18-H. P. d. c. Buffalo Pitts on 25-50 tractor. Frank Nelson, North Henderson, Ill.

WISH TO ANNOUNCE to the former customers of the Cant Saw Company of Canton, Ohio, that they have closed down their plant indefinitely. I have been foreman for the above firm for several years and take pleasure in announcing that I have started a repair factory at 2219 Seventh Street, S. W., Canton, Ohio, where I will hammer and pair saws of all kinds, also furnish repairs for the Canton saws, and repairs for all other makes of saws. I also handle new saws of all kinds. F. Heinemann Saw Company, Canton, Ohio. Bell Phone 3382; State 2221L.

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24 H. P. Port Huron traction engine
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16 H. P. Avery traction engine
9 H. P. J. I. Case engine
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36x60" Port Huron separator
33x54" Port Huron separator
30x48" Rumely Ideal separator
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24x42" Goodison & Co. separator
32x52" Nichols & Shepard separator
17x22" Whitman hay press
17x22" Ann Arbor hay press
No. 8 Birdsell clover huller
12 Ton Port Huron road roller

Some of this machinery has been used but very little. We are offering same at close prices. For further information write us.

Port Huron Engine & Thresher Co.
Port Huron, Michigan

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest References. Prompt Service. Reasonable Terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.



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THE LADS THAT MADE GOOD
your approval these tires, which are now PERFECT in each and every way.

In order to avoid irresponsible requests for shipments, a deposit of \$1.00 will be required with each tire ordered, balance C. O. D., subject to your examination and approval.

These tires can be guaranteed for 3,000 mile basis. If you do not derive the above mileage, we shall make an adjustment suitable to your entire satisfaction.

Size	Tire	Tubes	Size	Tire	Tubes
30x3	\$ 7.00	\$2.25	33x4 1/2	\$14.75	\$4.00
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32x3 1/2	9.50	2.75	36x4 1/2	16.00	4.50
31x4	11.00	3.25	36x4 3/4	16.50	4.50
32x4	12.00	3.50	37x5	17.00	4.75
32x4	13.25	3.75	37x5 1/2	17.25	4.75
34x4	14.50	4.00	36x4 1/2	24.00	

We are also offering Goodrich Silvertone Cord tires at the following prices:

33x4 1/2	\$17.50
34x4 1/2	20.00
35x5	22.00
37x5	25.00

State whether straight side or clincher, plain or non-skid is desired. A special discount of 5% is allowed when full amount accompanies order. ORDER NOW. When ordering, please mention The American Thresherman and Farm Power.

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"We haul local growers' fruits and delicate vegetables, such as lettuce, on pneumatics—Goodyear Cord Tires—because they are marketed in better condition this way and buyers give first choice to produce so protected. Our Goodyear Cord Tires run everywhere in cultivated fields and in a sandy orchard and deliver mileages to 15,000."—C. C. McIntosh, of McIntosh & Andru, Truckmen, Palmetto, Florida

AS statements like this make apparent, more and more farmers are preventing the bruising of fruit, mutilation of delicate vegetables and much shrinkage in livestock by hauling on Goodyear Cord Tires.

In this way they reverse the situation that existed when solid-tired trucks or wagons were used with a resulting loss in crops, stock weight and general income due to slow, jarring transport.

On the resilient Goodyear Cord Tires a farm truck delivers smoothly and quickly, safeguarding the original condition of the load so as to secure the best prices for it.

The able pneumatics thus become important factors in the marketing of perishable produce and carefully fattened animals, as well as in practically all the work of raising and handling on and off the farm.

The excellent and often unusual mileages obtained from these tires attest the toughness of Goodyear Cord construction developed with that extraordinary manufacturing carefulness which protects our good name.

Farmers' records, detailing how pneumatics assist crop moving, motorization, chores and other activities, can be obtained by mail from The Goodyear Tire & Rubber Company, Akron, Ohio.

GOODYEAR
CORD TIRES

The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON, WIS.

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July, 1920 Yearly Subscription Price One Dollar **Vol. 23, No. 3**



The belt that needs no breaking in.
GOODYEAR-KLINGTITE BELT Transmission

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The First Bushel and Goodyear Belts

His own words best measure the value Joseph Duesing, Jr., of Spearville, Kansas, places on a particular feature of his Goodyear Klingtite Belts—the fact that they need no breaking in.

"I have been in the threshing business in these parts for 16 years," says Mr. Duesing. "I have 'broken in' ten different kinds of belts, most of them of the stitched variety. And I can truthfully say that I could afford to pay for two Goodyear Klingtite Belts in the time required to 'break in' the ordinary belt.

"The first day I hung it on the pulleys, I threshed as many bushels of wheat as I have on any day since. This is the first time I have accomplished this feat in all my years in the business. I operated two machines last season, both equipped with Goodyear Klingtite Belts, and you can say for me that they will always be Klingtite-equipped in the future.

"Heavy straw made threshing far more difficult last season than for years past, and this naturally worked

an awful hardship on the belting, but we never stopped a minute in 21 days of threshing on account of belt trouble. We averaged around 1,400 bushels a day, and we attribute our success and consistent running to the Klingtite Belt."

The whole story of Goodyear Klingtite Belt performance is one of trouble-free, full-powered, economical operation. Friction-surfaced, Goodyear Klingtite Belts hold the pulleys in a slipless grip. Flexible, they run loose and favor the engine bearings. Moisture-proof, they work steadily in any weather and do away with engine re-setting. Unstitched, they wear evenly and do not separate at the plies. They last longer, require no dressing, and need no breaking in.

For your threshing there are endless Goodyear Klingtite Belts; for other farm work, Goodyear Klingtite Belts in any lengths you may require—all uniform in quality, and strength—built to protect our good name and to be your best help on the farm. Write to The Goodyear Tire & Rubber Company, Akron, Ohio, for a copy of the Goodyear Farm Encyclopedia.

GOODYEAR

KLINGTITE BELTS

The AMERICAN THRESHERMAN AND FARM POWER

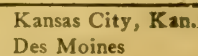


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The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, JULY, 1920.

No. 3.

The Old Thresherman Turns Artist

By W. C. SMITH

I KNEW the Old Thresherman was enjoying his job long before I opened the barnlot gate and turned into the shed where he was working. He had a funny little song—without words and almost without music—that he entertained himself with when busy and alone.

"Tee dum, tee dum, tee diddle tee dum. Tee dum tee di doo doo," was its burden, and he sang it over and over without variation.

"Hello," I called as I walked into the shed. "Painting her up a little, eh? Think you can fool the natives with paint?"

The Old Thresherman picked up a clean piece of waste and carefully wiped the splotches off of his face and gave attention to his hands.

"I got a little on the separator, anyway," he said. "How do you think she looks, sonny? Some artist, ain't I?"

"Sure," said the Old Thresherman. "I get you. Wouldn't think I'd run the old girl fifteen seasons just to look at her, would you?"

I confessed that I would not and added that the separator looked as though it might last as long or longer.

"Come around and take a peep inside," he said.

I walked around to the blower and stuck my head inside. The inside of the separator was as shiny with paint as was the outside. Every rack and rocker arm had received a protecting coat and the grain pan and shoe looked as though they had just come from the shop.

"Took 'em all out," explained the Old Thresherman. "Gave 'em a good going over and put the daggoned things back after I painted 'em. You see you find every little leak, every loose bearing and all that way. Don't do that every year, of course.

workshop and shed. He was certainly well prepared to keep his machinery in repair. Over in one corner stood a portable forge. A various assortment of wrenches hung along the walls where they would be handy. He had a pipe vise and a square jawed vise mounted on a work bench and in a long drawer was an assortment of wood-working tools. Various boxes contained nuts and bolts and screws and others held pipe fittings of various sorts.

"Where did you pick up all of this stuff?" I asked. "It must cost considerable to rig up a shop like this."

"Not very much," said the Old Thresherman. "Just bought the tools along as I needed them. Saved most of the bolts and nuts and such things. Tore down an old binder and that little four-roll shredder the boys used to run and saved the pieces



Outfit of W. C. Robertson, Peru, Miami County, Indiana.

"Fine. Looks like a new one. Suppose that coat of paint will get you some additional work, too. Folks will think you got a new one. That is part of the psychology of paint."

"Shucks," grinned the Old Thresherman. "You do beat all for big words. I put the daggoned tuff on to keep the wood from rotting. But it does kinder help to get a job now and then. First time I painted her up I felt about as proud as a kid with a new airgun, too. Funny how it works on a fellow."

"That's a part of the psycho—"

"Never mind them big ones," The Old Thresherman squinted up one eye and walked back where he could get a better look at his finished job. "Yes, sir," he said. "It does work kinder funny. A fellow keeps his machinery painted up and he takes a sort of pride in it. Let it get to looking run down and durned if he dont just let it run down. People say 'why don't you get a new machine, George,' and first thing George knows he gets the fever for a new one himself. He keeps looking at that old machine and fixing things up with baling wire and stuff because he reckons it is a-getting old and he had better trade it in to the company for a new one and pretty soon it all goes to sticks."

"That's psy—"

Think this makes about three times on this separator. Pays, too."

I gave the blower a whirl with my hand as I drew my head out and was surprised at its freedom of motion. It seemed exactly balanced.

"Balance it up every year before I start out," he told me in reply to my question. "Got to keep your blower balanced or out goes a fan. Runs easier, too. Ain't no trick to balance it up and sometimes it won't need it for three or four seasons, but when it does need it you ain't long a-finding it out. Let one get out of balance one time and throwed a fan right out through the side of the machine. Had to shut down for a day to fix it up and that learned me something.

"I aim to keep my cylinder in pretty good balance and the pulleys all lagged that need it. Then with a set of belts that will stand the strain a fellow stops about nine-tenths of his troubles. Never could see the idea of trying to make a thing last when it was gone up. Might as well fix it first as last and usually first because it saves time in the end. Plenty of oil when she's running, a good canvas when she ain't, a shed and enough sense to go over her once in a while and fix things up just a little before they need it keeps a separator up. Never was no hand to let my stuff go to sticks."

I took a good look about the Old Thresherman's

and believe me, they come in pretty handy. Believe in saving stuff like that and having a place to put it. Saves money and time both. Some folks don't believe in saving time that way. Fellow came along where Hi Stanley was carrying out corn to his hogs one day.

"Why in the name of goodness don't you fence off part of that corn field and let the hogs help themselves?" he says to Hi.

"Too much trouble," says Hi. "Trouble," says the fellow. "But look at the time you can save." "Yes," says Hi. "But what the dickens is time to a hog?"

The Old Thresherman picked up a bunch of band knives and turned to an emery wheel in the corner of the shop.

"Like to have my band knives sharp," he said. "Carry an extra set and aim to have one sharpened while the other one is getting dull. Ain't many does that but my experience is your feeder is a-going to do a lot better job when it is cutting the bands. Ain't much of a job to change them and I make a point to have my separator man keep them changed."

He squinted along the edge of the knife and laid it aside and picked up another one.

"Have to be a leetle careful with the emery.

(Continued on page 58.)

The Business of Wheat Growing

By FLOYD BRUCE

WHEAT growing is a big factor in the agriculture of America. It has done much to make a reputation for the farming business of this nation the world over; the quality of the hard winter wheat grown in the United States is not exceeded by that produced elsewhere. There is every indication that a big acreage of wheat will be sown for many years to come.

Considerable progress should be made in increasing the average yields, by better methods of crop rotation, by good seedbed preparation, and by planting high yielding varieties and strains, such as the famous Kanred variety developed by the Kansas Experiment station, for example. The yields of Kanred have averaged from three to five bushels an acre above that produced by any other variety of hard winter wheat in that state.

Much attention is needed to getting better seedbed preparation. The tendency has been toward the growing of too large an acreage with the equipment available—especially has this been true in the main wheat growing regions in Central Kansas, Nebraska and Oklahoma—and a considerable part of the crop has been “hogged in” some years. Naturally the best yields cannot be expected on inefficiently prepared soil. Fortunately some excellent experimental work in seedbed preparation for wheat has been done by the Kansas Experiment station; the tests at this station probably are the best which have been conducted anywhere in the world. They should be studied carefully by every farmer who is interested in wheat raising, and they have now been run long enough so the average results may be taken as typical.

Perhaps the big thing shown by these tests is the importance of deep, early plowing of the seedbed. This has been true generally on all of the stations, in the coöperative tests and on the good farms generally. The average acre yield on the fields where wheat was grown continuously from 1911 to 1919 was as follows: disked at seeding time, 6.9 bushels; plowed in September three inches deep, 12.8 bushels; disked in July, plowed in August six to seven inches deep, 18.3 bushels; listed in July, ridges worked down, 18 bushels; listed in July, ridges split in August, 17.3 bushels; plowed in July six or seven inches deep, 20.3 bushels; plowed in August six inches deep, 18.7 bushels; plowed in September six inches deep, 14 bushels; and plowed in July three inches deep, 17.6 bushels.

These yields would, of course, be much larger if wheat were grown under rotation—this will always bring

the yields up greatly. This also is true: when wheat is grown under rotation it is not quite so important to plow deeply in July as when it is grown continuously. A rotation will enable one to decrease the depth of plowing, and thus to lower the cost of production. The early tillage treatments, however, are important in any case; they are essential in enabling one to conserve moisture to aid in the forming of plant food.

The use of a disk in connection with a binder pulled by a tractor at harvest time is important, as was well demonstrated by many farmers in

It is important that the land should be kept cultivated after it is plowed, to kill weeds, conserve moisture and aid in the forming of available plant food. The ideal seedbed for wheat consists of firm, well-compacted soil, and to get this from land that has been plowed deeply requires both time and work. And remember this about the seedbed—if it is not fairly firm, if the soil has not been well prepared, there will not be a good capillary connection between the soil and the subsoil, and if this capillary attraction is not well restored, the subsoil water cannot be used by the growing

plant. If the young wheat plants cannot use the soil moisture readily, they will not make a good growth before winter sets in. If the wheat does not make a good growth in the fall, the young wheat plants will be injured by the freezing of the ground, for the root system will not have time to get firmly established.

After the land is plowed, it ought to be worked after every rain, unless the rains come too frequently. The disk is the best tool to give this first cultivation with under most cases, and the harrow can be used in the cultivation just before the seed is sown. The soil should be in this con-

dition when the seed is planted: have loose dirt on top about as deep as the seed is sown and below this the ground ought to be firm and make a good capillary connection with the subsoil. The firm soil below supplies moisture for germination and growth, while the mellow soil above the seed allows a good circulation of soil air. It also aids in warming the soil, as it absorbs the heat from the sun during the day, and acts as a blanket over the soil to conserve this heat at night.

There are some conditions under which it is best to summer fallow the land for wheat, although where there is enough moisture to produce a crop every year this is a practice to be discouraged. On many farms in the dry sections

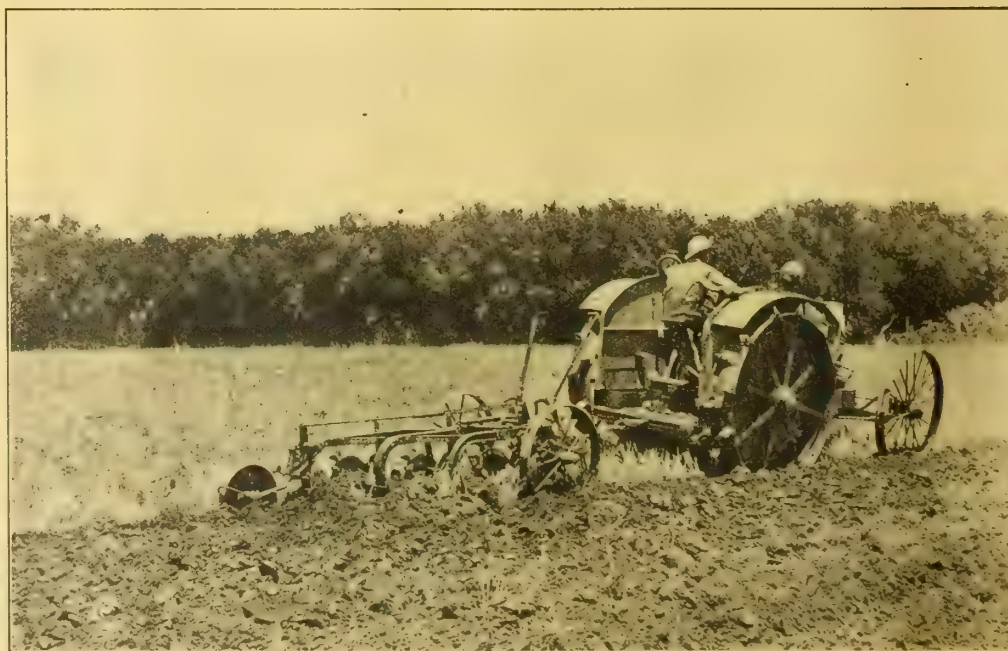
summer fallowing has paid well, and it is probable that the practice will be used to an increasing extent. A farmer of western Kansas writes: “If the yields on the summer tilled land for the last four years are divided by two, on account of the land being used two seasons to produce one crop, there would still be three bushels an acre in favor of the summer-tilled land. The labor required to produce two crops is much greater than that required to produce the one crop.”

Of course, this test does not show that one crop in two years will pay better than two crops where there is enough moisture to grow one crop a



Use of the Tractor Quickens the Pace of the Harvest Work.

1919. Some excellent work was done by Charles Lowe of Caldwell, Kansas; he hitched a binder to one corner of his tractor and a disk to the other, and the bundles dropped on the disked land just behind the disk. The escape of soil moisture thus was stopped a few minutes after the wheat was cut. Any Hessian fly in the stubble was injured greatly and the conditions were made favorable for the volunteer wheat and the weeds to germinate; these were killed later by plowing. It was possible to plow this land during a dry time when the undisked fields could not be broken. There is every indication that disk in this way will become a common practice on the farms which are so fortunate as to have tractors.



Early, Deep Plowing for Wheat Helps to Increase the Yield.

(Continued on page 60.)

Real Trucks on Real Farms

INDIANA, KANSAS AND WISCONSIN COMPARE NOTES

RECENT figures have shown that farming uses more trucks than any other industry. Some manufacturers, when reminded of this, smile a pitying smile. They think of the farmer's truck as some broken-down passenger car in which a plain deal box has been mounted.

No doubt the earliest farm trucks were make-shift trucks. So were the first farm houses, barns and fences. The early settlers of Kentucky were offered no woven-wire fences as a substitute for split rails; if they had, they would have been without the wherewithal to make a purchase. The first settlers of western Kansas did not build sod houses entirely from choice. The Mormons, when they built the Tabernacle at Salt Lake, used wooden nails; yet they might have been able to use metal nails, had any such been found within a thousand miles.

The first farmer to motorize his transportation used what he could afford to buy. If he had an old touring car with badly-battered body, why shouldn't he convert it into a truck? In many cases he bought a truck unit attachment, which had a strong rear axle. He took what he had and made it serve his purpose.

Many farmers have passed the make-shift period. Their farm trucks have been bought for a specific farm purpose, the same as their tractors and other farm machines.

Further, their problems are demanding large trucks. Each month finds more farmers learning the value of employing one man's time to haul a three-ton load rather than a one-ton load. Few farmers will find an expensive three-ton truck economical for exclusive use on one farm. Many farmers are finding that custom hauling, done when their own farm hauling is finished, goes far to make the large truck profitable.

Farmers doing custom hauling have been interviewed in Ohio, Kentucky, Michigan, Indiana, Wisconsin, Illinois, Missouri and Kansas. Several of these cases are cited.

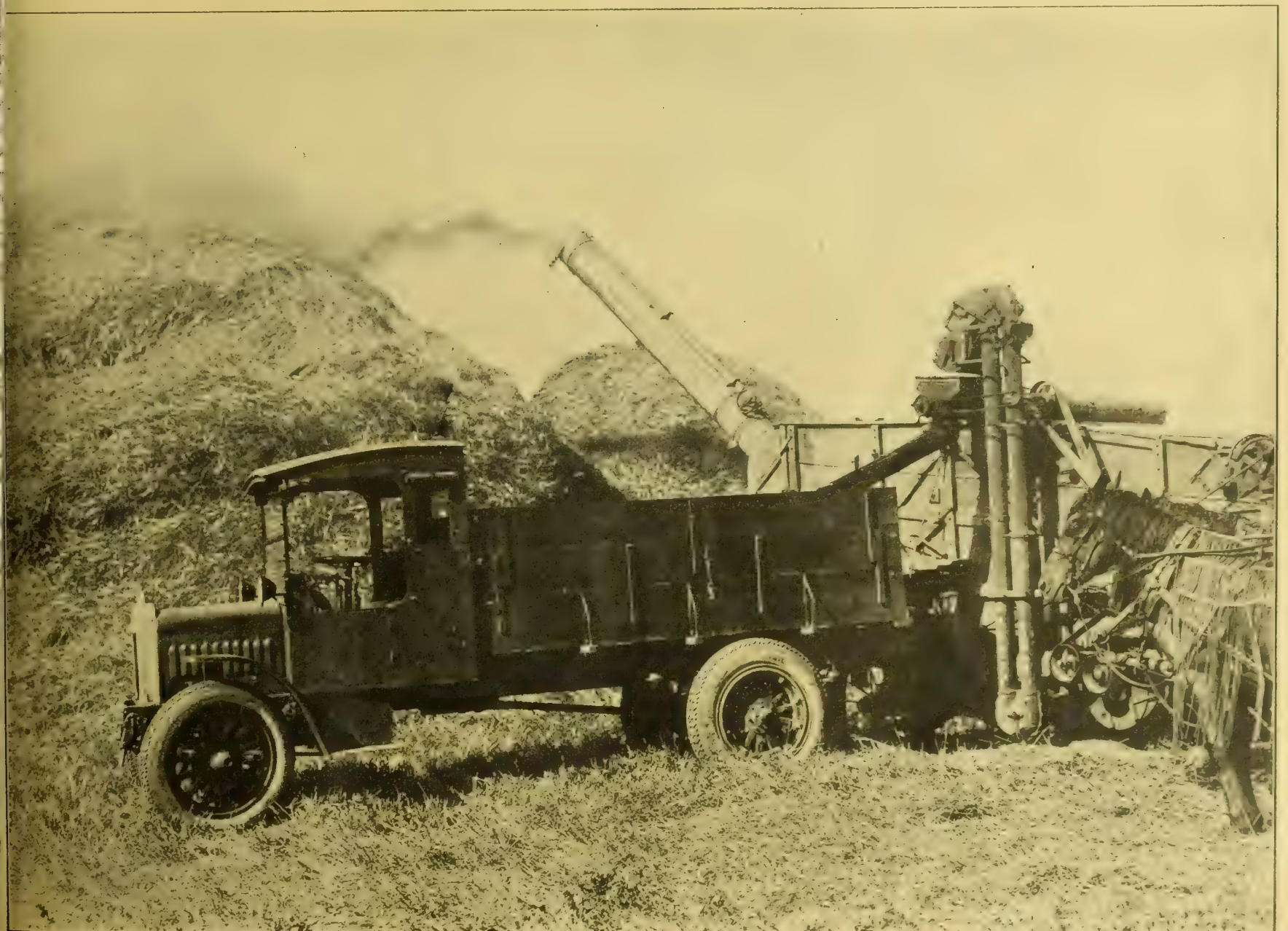
Mr. Ben Minster of Monroeville, Indiana, believes in using a large truck. He was one of the first farmers in the Fort Wayne section to own a tractor, years ago, and he has used four different types of tractors since he was converted to tractor use. Several years ago he took a light passenger car and made himself a truck. His success with this light truck convinced him a large truck would be a money-maker for him. About nine months ago, he bought a truck with two-and-one-half tons capacity. It has a real cab and body. It looks and is the real article.

Before the Palm Sunday cyclone struck his farm, Minster had all his farm machinery well housed. Easter Day found Ben Minster's place looking something as Verdun looked on Armistice

Day. Many of his neighbors were in the same plight; buildings had been blown down, stock killed and implements exposed to the weather. The front lawns were covered with household goods.

The truck was undamaged. Minster lost no time in getting material for new buildings to his place. He had enough orders for custom hauling to keep him busy all summer. Since farm work demanded most of his time, he worked a full day in the fields, then put many evenings on the road between his farm and Fort Wayne. In the old days, with horses, the trip to the city had required most of a day. Now an evening furnished the necessary time to carry twice the load his wagon had once carried. The ride was invigorating. It seemed restful and pleasant after the day's work. It helps his neighbors to market stock and to bring out supplies, and it is rapidly paying for the original cost of the truck. When a big truck travels one hundred and twenty to one hundred and eighty miles each day, as Minster's does when the whole day is spent in hauling, it means money to the owner. Minster gets eight miles from a gallon of gasoline and he has never had to change a spark plug. Already he has been offered five hundred dollars more for his truck than he paid for it.

(Continued on page 59.)



One Kansas Farmer Does the Custom Hauling While His Son Operates a Custom Threshing Outfit.

Canadian Government-Owned Elevators

BY EARLE W. GAGE

A MONTANA wheat grower gave me a very striking illustration of the difference between the kind of aid grain growers south of the line dividing Canada from us receive, as against those to the north. "About all that we have had in the line of aid from Washington in the past five years has been plenty of advice," remarked this Montana man, "while those grain growers of Canada have had real help. It takes more than a nice, white collared specialist to tell you how to do your work—it demands real help." Of course, we should add that Canadian grain growers have formed themselves into a coöperative movement unequalled in the grain world, which transacts a hundred million dollar business annually, and therefore are in a position to secure something beside "advice."

The Trade and Commerce Department of the Canadian Government, through the Board of Grain Commissioners for Canada, has erected and is now operating five large grain elevators in the Dominion.

The entry of the government into the commercial handling of grain was due to considerable agitation on the part of the agricultural interests regarding the operation of privately owned terminal elevators. A public terminal elevator was erected by the government at Port Arthur, Ontario, with the primary object of furnishing facilities whereby the grain growers of the West would have the opportunity of consigning their grain to, and having it completely handled at an elevator owned and operated by the government. Of course, there were those who cried, as ever, "What is grain elevator terminal facilities to us; this is plain socialism; let the farmers store their own grain!" Those howlers are ever present to stop progress, and try to make us believe that the handling of so essential a food crop as grain has no part in the interests of the consumers. The fact of the case



View From Canadian Northern Elevator, Port Arthur, Canada.

is, every consumer ought to demand that this country—the U. S. A.—own, like Canada, her own elevator facilities, thus removing from the gambling pit the essential bread wheats.

With the object of removing the several evils of the privately dominated, profiteering "wheat pool," these Canadian elevators were erected,

the price being paid from public funds. The Canadians took the view that the proper transportation of wheat to the consumers of their own country and the world was exactly as essential as that of municipal water and light.

These elevators might be classified under the three headings of "Public Terminal," "Interior Terminal," and "Transfer." The Public Terminal is located at Port Arthur, Ontario; Interior Terminal at Moosejaw, Saskatchewan, Saskatoon, Saskatchewan, and Calgary, Alberta, and the Transfer elevator at Vancouver, B. C.

The first unit, that at Port Arthur, was completed in 1913 at an approximate cost of \$1,500,000. This elevator has a total capacity of 3,250,000 bushels of grain. The work-house has a capacity of 750,000 bushels and is equipped with the most modern machinery for the proper handling, drying, cleaning and preservation of grain. It might be well to state that all the elevators operated by the Board of Grain Commissioners are of the most modern and fire-proof construction.

In September, 1913, contracts were let for the construction of two interior terminal elevators, one at Moosejaw, and the other at Saskatoon, Saskatchewan. The former was opened to receive grain on October 14, 1914, and the latter on October 12, 1914, or just in time to take active part in handling grains for the great war. These elevators, which cost over \$1,000,000 each, are duplicate plants, having been constructed from the same set of plans and specifications, save for minor alterations rendered necessary by local conditions. The capacity of each is 3,500,000 bushels. The work-house, which has one hundred and twelve bins with a capacity of 500,000 bushels, is equipped with ten No. 9 Monitor separators, two Monitor

(Continued on page 58.)



Canadian Government Elevator at the Head of the Great Lakes.

★ TEXACO GAS ENGINE OIL

★ THUBAN COMPOUND

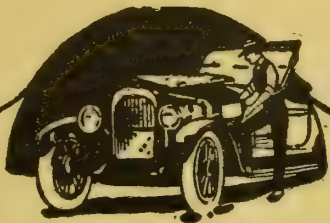
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The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



Under the blazing mid-summer sun, the horse and mule often fall down—but the tractor goes on. In fact, the tractor often does its best work in hot weather. And in the rush season it pulls the tillage apparatus by moonlight as well as by daylight.

Your tractor will go on without faltering, or time out, if you exercise proper foresight as regards water and oil.

You must oil regularly, carefully, and use the best available. And this means TEXACO TRACTOR OIL.

It helps immeasurably in keeping the tractor running at full capacity.

TEXACO TRACTOR OIL has the right body for the work and it clings to the hot surfaces of cylinders, pistons, and bearings. Does not break down under engine heat, provides adequate and constant lubrication.

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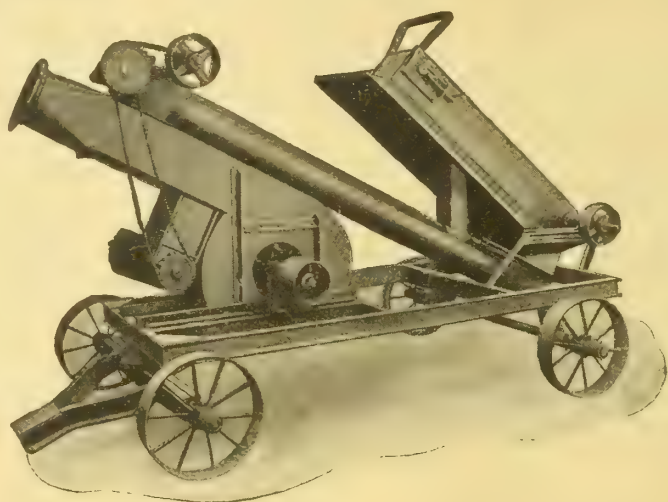
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Here is the machine
you've been looking
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Portable Grain
Blower and Conditioner



The Great Labor Saver and Grain Improver

The machine that will not only fill the farmer's grain tank, but that will also put his grain in cars without any scooping.

Handles Grain Direct from Wagon

The blower is equipped with tiltable wagon hopper; no backing to be done in order to place the load in position for dumping.

The grain blower not only handles the grain, but at the same time cleans the grain from chaff, dirt, smut, etc., in addition to absorbing the outside moisture of damp and wet grain. This will give the grain a better grade and make it better fit for the storage and the market.

No cracked or bruised grain. All grain is fed into the air current ahead of the fan. Positively non-chokable, the Bernert Grain Blower is the only blower system that will not choke, regardless of irregular engine power or the slipping of the drive belt, at the same time giving protection to the fan if foreign material such as a stone or piece of iron should be fed in with the grain.

You cannot afford to wait and be any longer without this machine.

See your implement dealer at once and if he cannot supply your wants, write immediately for descriptive matter to the

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Listen To Me

BUCK MCKINNEY.

A MAN never knows how popular he is until a book agent or a politician "works" on him.

INSTEAD of bellyaching about the heat this summer, just let your mind ramble back to the past winter and your coal bill and you'll no doubt appreciate Old Sol.

SISTER, if your husband talks about a kitty in his sleep, the chances are that he has no reference to the house tabby nor to any lady friends of his. It is more than likely that he has had his feet under a nice little table with some gentlemen friends and it's a cinch they were not playing dominoes.

THE five socialists who were elected to the New York legislature were promptly unseated by the house. Pardner, you will find the people of the United States have no "stummick" for anything that tends to destroy the Constitution and all it stands for. Freedom of speech doesn't mean you can get on a soap box and yell "To hell with the country."

WHEN man looks all around him and sees the evidences of a Divine power, he can only wonder. Surely all these beautiful things of life are not just happenings. They must come from a Master Mind. Of course, man created a great many things and causes beauty to grow where ugliness once grew but what is the power back of man that gives him ideas? While we may not all live up to the rules and regulations, yet we believe. You need go no further than nature itself to realize the fact that there is an All Wise and All Just Creator.

UNCLE Henry Ford got a "trimming" from Newberry over in Michigan for United States Senator and then raised an awful "squawk" over the money that was spent to elect Newberry. The consequences are that Newberry and a bunch of his henchmen were called into court and fined and given prison sentences besides. Now it is very commendable of Hank to see that these law breakers were brought to justice, but, at the same time, the sire of the famous "Lizzie" must have spent considerable "jack" to cause the other fellow to jar loose so freely. I wonder if "Henrah's" expense account would pass muster.

MY friend, Uncle Silas, tells his readers some wonderful tales about his fishing and shooting and proves them all by me. In justice to myself I will say that I have to eat and this is the only job I have now. I used to earn an honest living but since people have so generally put toilets in their homes, work in my line has been slack. I could have become a porch climber, but I took this job, the only difference being that doing this sort of work I can keep out of jail, but if Uncle Silas ever ties the can to me, I'll spill the beans on some of his exploits. Say, did you ever see a mother bird feeding her young ones when they were a few days old? When Mrs. Bird came home with the worms, how they would open their mouths until all you could see was a place to put grub into, like looking down a tunnel? I'm in the same fix. I've got two like that to feed. Now you know why I'm good proof for a lot of "bunk," don't you? I was brought up different, but I'm a victim of circumstances.

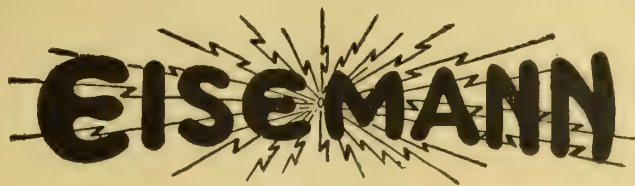
JUST to show you the difference in people. Take Aunt Malinda for instance. Now you never hear her bragging her head off about the things she does. I should say not. She is one of the most quiet, retiring ladies I ever met, and honest, why she is so honest that when the assessor came around she held nothing back at all. Just gave in everything they had assessable. I know because I heard Uncle Silas rave and snort and tell her the next time the assessor came around to send him up to the office. And she takes everything so nice and peaceful like. I know one time Uncle Silas had coaxed me into a little game with the boys and we stayed out rather late and when we got home (he took me home with him that night because I didn't dare go to my own home) we pulled off our shoes, sneaked in the house and turned on the light and breathed a great big sigh of relief, thinking we had got by the censor. But when we turned around there stood Aunt Malinda. Of course, I expected to get the riot act read to us, but she said very little, very little. I don't think she said over, oh, say, twenty thousand words in ten minutes. I don't see how she has lived with Uncle Si as long as she has and kept her disposition. Now don't get the wrong idea. I'm not knocking Uncle Silas, because he is my meal ticket, but simply giving Aunt Malinda the great credit due her for putting up with what she has put up with. I feel sorry for her myself, but I am in no position just now to knock her husband, you understand.

Lag your Engine and Separator Pulleys NOW! You can do it at home without the use of rivets or removing pulley from shaft. **Washington Superior Pulley Covering**

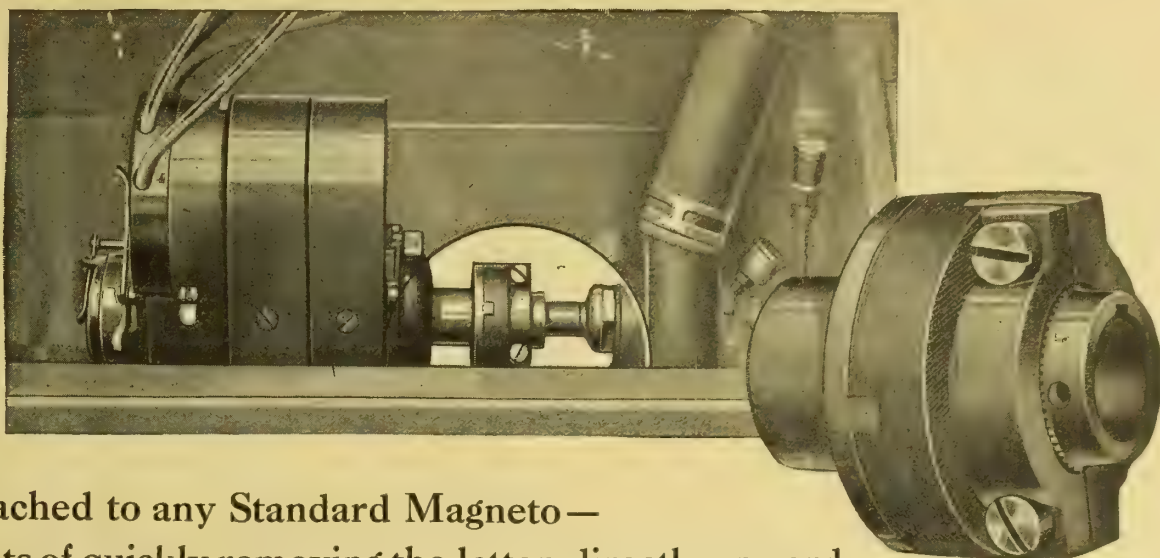
Washington's Superior Pulley Covering has been used for SIXTEEN years by Progressive Threshermen, because they can apply it to a metal, wood or paper pulley and it gives better results than either or a leather lagging, and costs less. It will save many times its cost in belting alone, besides greatly increasing your output. Put up in outfits of a special glue and canvas, with brushes, scraper and plain directions. for use, securely packed. Write for sample and prices today.

W. S. Raymond, Manufacturer, 708 Chicago Road, Niles, Mich.



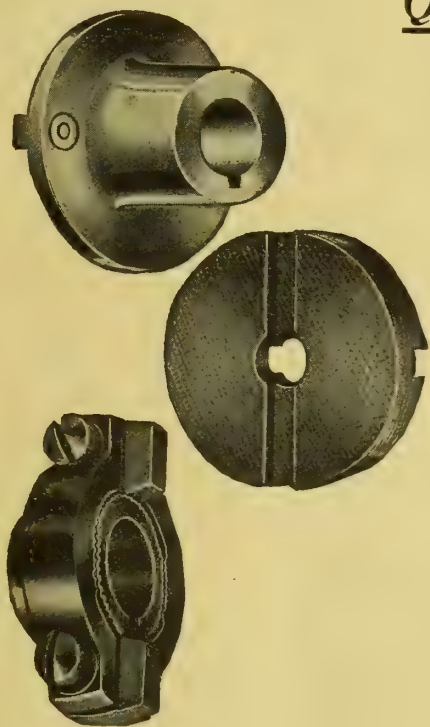


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THIS new coupling incorporates all the well known advantages of the Oldham Style Coupling without the possibility of noisy operation.

The simplified design permits of the easy adjustment of the timing of the magneto to the engine.

The magneto setting is changed by merely loosening two screws, shifting the position of the two clamps and then re-fastening the screws. Settings are possible every 6 degrees throughout a complete circle.

The drive is absolutely positive as friction is not depended upon in any form whatever.

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A PAGE WITH THE EDITOR

THE threshermen of the state of New York are going to have compensation insurance, and all other kinds of insurance in time. The arrangements are being completed for this just as fast as possible. New York state, like some others, has some very queer insurance laws, and in order to comply with these, certain requirements must be lived up to, which require a little time, but just be patient and all will be made satisfactory in a short time. This matter is in the hands of W. H. Newsom, president of the National Brotherhood of Threshermen, and president of the Indiana Brotherhood of Threshermen, and of the Indiana Liberty Mutual Insurance Company. He is hot on the track of this proposition, and we hope to be able to report some effective work in the next issue of this publication.

It's the cheapest kind of political perfidy to try to dodge the whiskey question, by inserting planks in party platforms which mean nothing and which are only baited hooks for catching votes.

The party which pretends to be one thing in this, and another thing in that, which straddles and does not come out openly for standing by the laws of the country, deserves defeat. It has been overwhelmingly voted that there shall be no more whiskey or beer made and sold in the United States, and this law is upon the statute books, and has stood every test as to its validity, consequently it's the will of the majority, and is the law of the land. As such, Sile is for abiding by the law and enforcing it, much as Sile might feel inclined to take a "nip" now and then himself. It's forbidden by law, and Sile's for the law, first, last and always. Let the party who is in favor of returning to the days of saloons and drunken brawls come out flat-footed and say so, and let's submit the question to a vote of the people, whether we may have whiskey, wines and beer, and whatever a majority votes for, let that be the law, as it is the law at this time that we may not make or sell or even drink booze. Let's try it out fairly, and then if it doesn't work to suit us, let's vote "wet" if we can. On the other hand, let the Government, which has been a partner in the whiskey business for fifty years, and received

great revenue therefor, do the fair thing, and pay its side partners in the business for the property and business which it has confiscated from them. It's just as much of a wrong to take away the saloon man's business from which the Government has derived a revenue, without reimbursing him, as it is to take away any other man's business without giving him at least a fair shake in the way of adjustment.

WITH the passing of the "drink age," the "bar-fly" and the "spittoon cleaner" see a rift in the clouds of hope, according to the great grape-juice politician of North Platte.

ONCE in every four years the country has to be upset in a business way over politics. We all agree that it's a big country, the biggest on earth and the best, so let's get the presidential election over with, and start out with a business administration once more, and then settle down to real business and have done with jockeying over politics and politicians for a while.

THERE was never a time in which good, honest, energetic young men were in so great a demand in every walk of life as right now, and the farm and country home are suffering by reason of the boys flocking to the city to get big wages. There should be as great an inducement on the farm in proportion as anywhere else, and if there are not more farmers, and more help for those on the farm who are entrusted with producing that upon which the world is fed, bread and butter, we'll be up against it before many years for the necessities of life. Boys, stick to the farm!

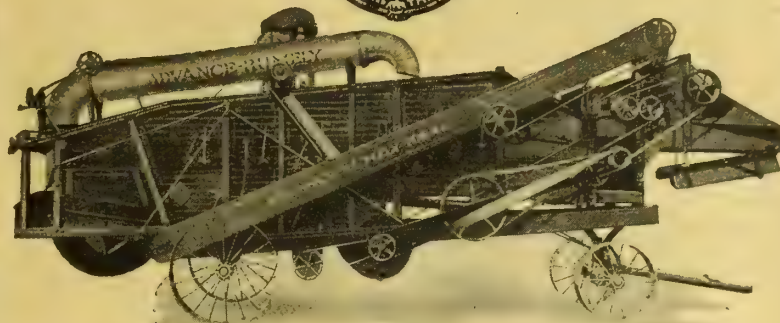
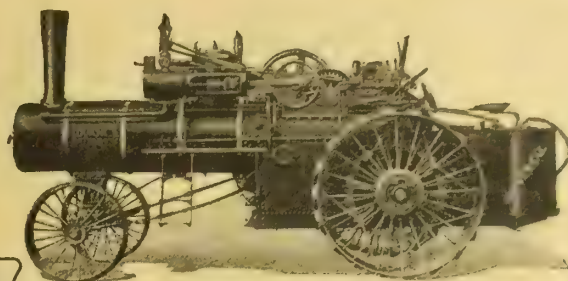
THE commissioners of Monroe County, Michigan, are not going to arrest every thresherman and owner of traction engines who uses the paved highways of that county as they had arranged to do. The farmers and threshermen of that county, aided by the manufacturers, and this magazine, have threshed out that proposition and it has been dropped like a hot cake. A meeting of the several interests involved, including the commissioners, was held, as noted in detail elsewhere in this issue, and a satisfactory conclusion was reached. Team work is what counts always.

As an editor, Sile would be negligent in his duty if he failed to let the rest of the world know how grandly old Portland, and all Oregon, for that matter, entertained the Shriners at the annual session of the Imperial Council in June. There was never anything like it "gathered together and exhibited under one tent," as the showmen say. Sile rode, standing up all the way, through six and one-half miles of human beings, two hundred and fifty thousand of them lining the streets, sidewalks and buildings the entire distance, and everybody smiling as only Oregonians can smile, great big, open faced smiles as wide as a horse-shoe, and making one glad to be there. Sile was moved to stand up and exhort the faithful all along the way, and to tell them that the "real preachers" were just behind his automobile.

Never in all the history of the world was there such a gorgeous display of uniforms, bands and good fellowship. And we only had Mount Hood moonshine to quench our thirsts, at that price!

THESE are not the days for reckless extravagance, but rather of counting the costs and conserving in all things. We have been sailing over the crest of the waves of prosperity, in many ways, and have been spending money like drunken sailors, all of us, until we fancy that these times will never end, but there is a settling down period after every volcano, and it's due now.

The Editor is anything but a pessimist, rather the opposite, but it must appeal to every reader of this magazine that neither wages nor the price of everything can continue at the present high altitude. No wage earner, be he a skilled mechanic or not, can earn a profit for his employer at one dollar an hour, any more than that person can afford to pay one hundred and twenty-five dollars for a tailor-made suit, or twenty dollars for a pair of shoes; everything is at a fictitious value, wages and all, and there is no way of reaching an equitable basis excepting to let the bottom drop out of high prices in every way, and get down to earth once more. In doing this, many there be who will find it hard sledding, and if you would avoid calamities sail your financial bark close to the shore until things right themselves.



Three Great Leaders

Unquestioned leadership is the tribute which has been given to Rumely products by the farmers of the Nation for unequalled performance under all conditions over a great length of years. For eighty years and more the Rumely factories have been supplying discriminating buyers of power farming machinery with equipment that has been characteristic for superior design and construction.

The OilPull Tractor

The record of the OilPull since 1909 when it was first produced, is without parallel. The first OilPull and hundreds of other old OilPulls, built nine, ten and eleven years ago, are still on the job—that's real durability.

Ever since tractor fuel economy tests have been made, the OilPull has held all world tractor fuel economy records—that's real economy.

The OilPull is the only tractor backed by a written guarantee to burn all grades of kerosene at all loads under all conditions—that's a real guarantee.

It will pull at drawbar or belt 25% more than its specified rating—that's real reserve power.

It is used by over 15,000 farmers—that's real preference.

The Ideal Separator

Wherever grain is grown the Rumely Ideal separator has for many years led the way for fast, clean, thorough threshing.

Including the patented traveling slatted chain rake, the Ideal has the largest grate surface of any separator built.

Size for size, it has the longest straw rack of any separator built.

It has lifting fingers on the straw rack instead of common shakers.

Extra large chaffer and sieve area, with uniform wind control make perfect cleaning sure.

All adjustments, oil and grease cups are on the outside of the Ideal, easily accessible when the machine is in operation.

The Ideal frame has no splices and no bolts—it won't sag, pull apart or break.

Five sizes: 22x36, 28x44, 28x48, 32x52 and 36x60.

Universal Steamer

For a great many years Rumely steam engines have been recognized the world over as standard. And the Rumely steamer you buy today is built to live up to the long standing reputation for absolute dependability and long service.

Built thruout in the Advance-Rumely factories, the material and workmanship are of the best and up to the high Rumely standard of manufacture.

No steam engines will be found which are more economical in the consumption of fuel and water or have greater steaming capacity.

The thresherman who buys an Advance-Rumely steamer can be sure of long years of permanent service and satisfied customers.

Three sizes: 18, 20 and 25 h. p. single cylinder.

ADVANCE-RUMELY THRESHER COMPANY, Inc.

LaPorte, Indiana

29 Branch Offices and Warehouses

ADVANCE-RUMELY

Sawyer Belts

Keep Separators Humming



TRADE **SAWYER** MARK
REGISTERED

WHEN threshing is in full swing every working hour is precious. A *Sawyer Stitched Canvas Belt* carries all the power all the time from engine or tractor to separator.

The *Sawyer Belt* has the strength and grip to pull over peak loads without faltering. It never lets up—keeps the separator humming at a time when any delay is costly.

Big threshermen and power-farmers for 30 years have found that the *Sawyer* is the main drive belt that stands the heaviest work. It resists moisture and temperature extremes—has no seams to rip under the strain.

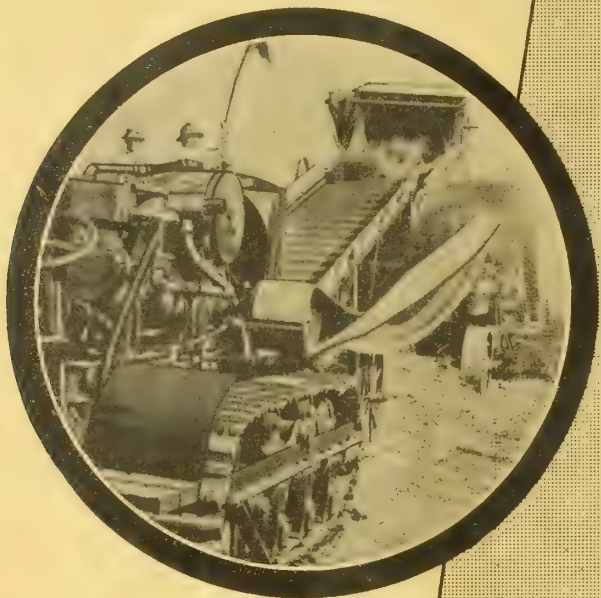
In replacing worn out belting be sure you get a genuine *Sawyer Stitched Canvas Belt* stamped with the "U. S." seal. We recommend *Sabeco Belt Dressing* and pack a liberal sample with each *Sawyer Belt*. Good dealers carry both, also the full line of U. S. rubber belting, valve packings, radiator hose and other mechanical rubber goods for farm use.

United States Rubber Company



Endless Stitched Canvas Belts

Put Hettricks To work



PICTURE yourself busy at work on some sort of belt job. How assuring then to know that the belt you're using won't "give away"—that you can depend on it.

That's the kind of belt that bears the name Hettrick. Dependability is woven right into every inch. If Hettrick doesn't answer your purpose, no canvas belt will.

Hettrick's good quality remains unchanged. They're as good as ever. At home on separator, shredder, husker, silo filler, huller, in fact, on any belt-driven machine.

Put Hettrick to work this year. You'll be in for a profitable run.

Hettrick Mfg. Company
Toledo, Ohio

Hettrick Canvas Belts

Aunt Malinda

WELL, the Supreme Court of the United States has decided that it's not a good thing to "take a little wine for the stomach's sake," or beer or any kind of a decoction that has enough alcohol in it to form a fuse for a firecracker.

"My country, may she always be right but, right or wrong, my country ever," would be a good thing to paste in your hat right now," is what I told Silas when he came home bringin' a copy of an evenin' paper bearin' this acrid information.

Silas was never what the oil well folks would call a "gusher" in the matter of "nips." Of course his early education as a small town druggist, where the tired traveler and he who was athirst might lave in the limpid streams from the barrels and kegs of the back room at ten cents a lave, 'way back in the seventies, prevented him from becomin' a tetotaler and gave him an insight into the ways and means of mixin' anythin' from a mint julep to what was known among the underground inhabitants of Colfax as a "decoction of the India collegogue," and in this way his conscience never bothered him if a man took a drink once in a while and, towards Christmas, an eggnog that was cheerin' to them that imbibed. Silas grew in grace, as Bill Campbell would put it, and always thought the matter of a drink should be largely left to the drinker. If he was a hog and wanted both feet in the trough or perchance wanted to wallow in it, Silas used to feel that the easiest way would be to give him a keg, provide a rubber hose and let him kill himself at the earliest possible moment, but now that prohibition that's goin' to prohibit has come, Silas has stopped drinkin' tea and coffee. He 'lowed he stopped smokin' years ago and that the temperance cranks 'd have to find another issue now that they'd put booze out of the runnin'.

"Well," I says, "I ain't figurin' on wearin' crepe over this decision of the Supreme Court. Already prohibition has done lots of good in lots of cases and you can easily see where drinkin' men spend more money on their families now than they used to do, and I've always been strong for real temperance."

"What about the millions of dollars' worth of property which in this way has practically been confiscated?" Silas asked me.

"Well," I says, "it does look like it was a dirty trick in the government to turn around and scuttle the ship without even offerin' anybody a life boat, when it's been a partner in the whiskey business ever since the Civil War, gatherin' in its share of the revenue in advance and whatever part of it that was paid for with the finger had to be borne by the manufacturer and local dealer, that is, the saloon keeper. Mind you," says I, "I'm not apologizin' for bein' bone dry, and I don't care a rip as far as I'm concerned, but I'm wonderin' if the government, which has been gatherin' in its millions of toll and tribute beyond the river in this whiskey, beer and wine transaction, has done the fair and equitable business with these people who've all this money invested, by just confiscatin' their business without offerin' a dollar of relief? It's wrong to make whiskey and beer, you say? Well," says I, "if it was wrong, the government was a partner in the crime and enjoyed the proceeds and never had anythin' invested exceptin' revenue stamps, while its partners, these whiskey makers and beer brewers, put up the capital. Shouldn't the government be made to stand its share of the loss by makin' a decent split? If it was wrong to make this truck," says I, "the government had no right to be a partner in it in any way, shape, form or manner, and while I'm not a lawyer I'd say 'Give the devil his dues' and pay at least a percentage of the loss. Right is right," says I, "even in dealin' with whiskeyites, and wrong is wrong, no matter who commits it, much less the government that's supposed to be always right."

"Now you know," says I, "that I worked for prohibition and got more'n one vote in favor of the Constitutional amendment, and I'd do it again, but unless the government stands its share in the transaction I don't believe that it's done the right thing and, besides, it's cheated its side partner. In other words, it looks like the government had helped 'crack the bank,' and then grabbed the swag."

When I'd finished expoundin' the law and equity of the case as it looked to me, Silas drew a long breath and says, "Malinda, Mrs. Bresee just gave me a nice bunch of fresh mint and I was wonderin' . . ."

"Well," I says, "if you can make a 'whiskeyless mint julep' I'll join you."

"No," he says, "I was goin' to remark that a friend handed me two ounces of what Petroleum V. Nasby called the 'sustenance,' and I think I'll ratify the action of the Supreme Court."

"Yes," I says, "I've always noticed that the man who had been on a spree and was going to quit, just wanted to take a last drink to hold down his good resolution, and then, of course, he had to take another to hold down the first one and the resolution both."

Silas is goin' to go bone-dry after the "makin's" have been exhausted, and when there's nothin' else to do.

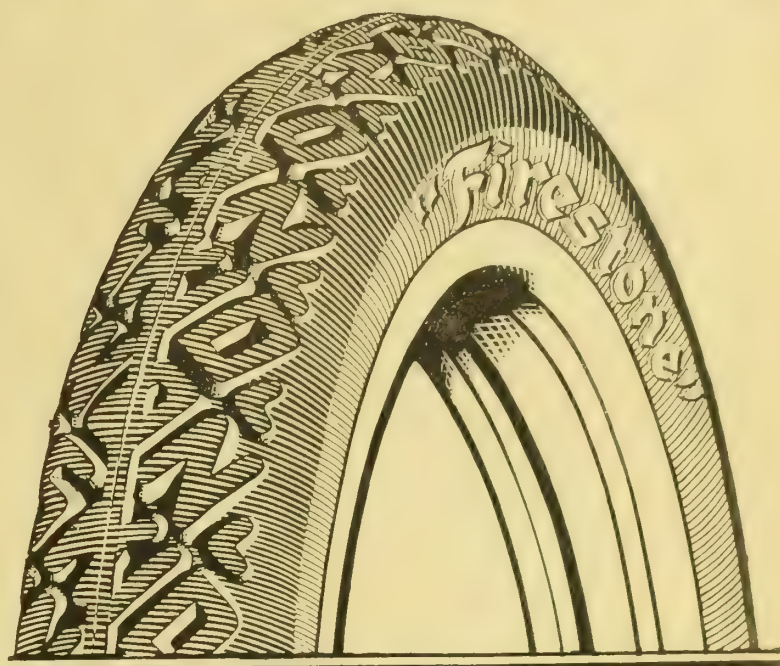
Firestone

Alone in the tire field—the Firestone 3½ takes its place beside the half dozen products of universal use which manufacturing genius has made standard.

Built in a specialized factory—by experts—with all the economy of concentrated production.

What the bulk of the people accept as the standard of value is right.

You owners of small cars can forget tire details—you need not bother with methods, features, or guarantees. Call for the Firestone 3½.



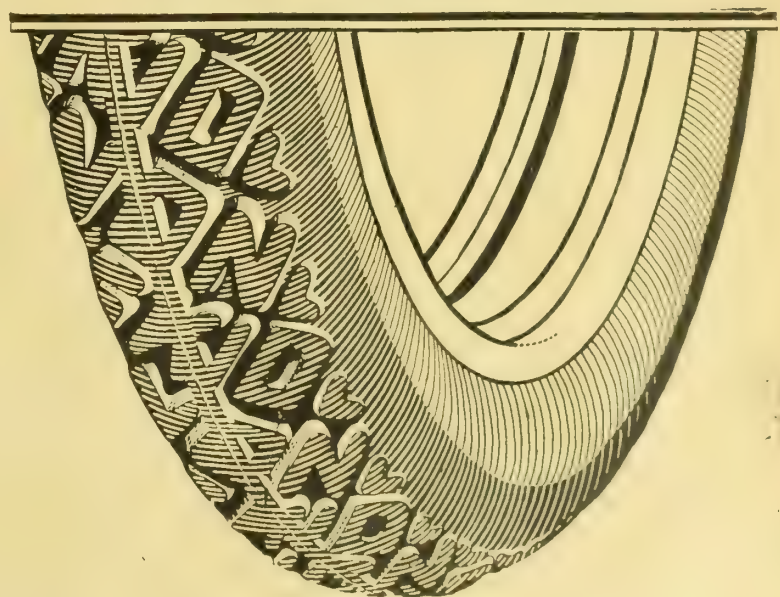
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\$22.50

Gray Tube, \$3.75

Red Tube, 4.50



**Most
Miles
per Dollar**

U.S.G.CO'S MEXICAN BOILER GRAPHITE



Clean Traction Engine Boilers

Summer and the approaching harvest are bringing with them the old bugaboo—boiler scale.

For water, even when filtered, produces hard formation in the boiler. And because the operator is forced to draw upon various sources of water supply he is particularly susceptible to scale trouble.

How to get rid of this hidden and dangerous enemy?

U. S. G. Co.'s Mexican Graphite turns the trick. It is a safe, thorough and inexpensive remedy. Mixed in with any kind of feed water it breaks down old, hard scale and prevents new formation, without injury to the boiler. Order a keg today on our money-back guarantee.

- Other U. S. G. Co. Farm Products:
- U. S. G. Co.'s No. 205 Lubricating Graphite.
 - U. S. G. Co.'s Mexican Graphite Transmission-Differential Lubricant.
 - U. S. G. Co.'s Mexican Graphite Cup Grease.
 - U. S. G. Co.'s Mexican Graphite Journal and Gear Grease.
 - U. S. G. Co.'s Mexican Plumbago Axle Grease.
 - U. S. G. Co.'s Brushes for farm lighting systems.

You're invited to correspond with us about your lubrication problems.

The United States Graphite Co.
Saginaw, Michigan

BRANCH OFFICES:

New York	Philadelphia	Pittsburgh	Birmingham
Chicago	St. Louis	Denver	San Francisco

Largest Miners of Graphite on this Continent



Organization

They Came, Saw and Conquered

The Monroe County, Michigan, farmers have struck a blow for freedom. Their victory has been overwhelming. Its fruits will be shared by all tractor and separator owners in Michigan, perhaps in the whole United States.

Much credit for organizing the farmer strength must go to Tom Walker of Toledo, Ohio. Mr. Walker had a legitimate right to enter the arena. While the fight was a Michigan affair, the county surveyor of Lucas County, Ohio (Toledo is county-seat), made a broad statement defending the road commissioners and siding against the farmers. Mr. Walker replied through the Toledo News-Bee. Seeing that the pleasure-car owners were getting aid outside the state of Michigan, Mr. Walker threw his strength to the tractor owners.

On June 18, the following notice appeared in a Monroe County paper:

First: See your Township Supervisor immediately and explain what this means and show him that he should vote to countermand these instructions to the County Commissioners.

Second: Be at Monroe, Michigan, without fail at noon on Monday, June 21st, 1920, as your County Board of Supervisors meets on that date and it is up to you to see that your Township Supervisor protects your interests by voting accordingly.

Do you want to lose your crop of wheat and oats? It is now up to you. Things are coming to a fine end when you, who pay the Taxes that built your roads, cannot use them. Think it over.

Mr. Walker's letters bore good fruit. When the merchants of Monroe opened for business on Monday, June 21, they found the streets already thronged with threshermen and farmers. These men looked as if they might be in the same fighting mood as their ancestors, when at Lexington they fired the "shots heard 'round the world."

When the time for a decision by the supervisors had come, after noon hour, the court house was packed. Husky looking farmers were seated on all window-sills on the first and

FARMERS TAKE NOTICE

"Mr. Ervin Getty,
"Dundee, Mich.
"Dear Sir:

"Toledo, Ohio, June 10, 1920.

"The Sheriff of Monroe County has received his orders from the Commissioners to arrest all violaters of their order of March 15th, with which you are familiar.

"However, when we met the Commissioners last Thursday, they stated that their orders came from the Board of Supervisors, which, as you know, consists of the Supervisors of each Township, making up a body of nineteen men.

"These men are the gentlemen who took up the agitation of this matter, and they are the men who issued the first order to keep traction engines and tractors off the roads.

"There will be a meeting of this Board in Monroe on June 21st and every thresherman in Monroe County must be there;

"Also, we want every farmer in Monroe County to come over to Monroe on June 21st and help show these men how strongly we are united in what we are asking. Talk to every farmer you meet about coming over.

"Yours truly,
"The Arbuckle Ryan Company,
"By Tom B. Walker."

Now, Mr. Farmer, you undoubtedly understand what this letter refers to, if not, it refers to a law in Monroe County, which prevents the traction engines and tractors from traveling on the improved roads of this County, unless they have bands over the lugs on the wheels. Now, Mr. Farmer, this is a very serious matter on your part, as it will force the threshers out of business; you should take the matter seriously as there will be a larger percent of the threshers going out of business and you can't blame us as our machinery will bring more money now than it cost when new, so make it your business to meet us at Monroe next Monday. Don't leave it to a handful of threshers, but come out yourself and help to have this unjust law annulled or you are going to face a serious matter in getting your threshing done. Don't fail to be in Monroe next Monday.

Ervin Getty.

Mr. Walker did not stop here. He was thoroughly aroused. He secured the names of all influential farmers in Monroe County and sent by first-class mail the following notice:

How Do You Expect to Get Your Threshing Done This Fall?

You may think that is a foolish question but when you know that the Monroe County Board of Commissioners have issued instructions that every man who goes on to an improved road with a Traction Engine or Tractor having lugs on the wheels is subject to arrest by the Sheriff, you will get the reason why we ask this question. The Threshermen now say they are not going to run their rigs and take chances on being arrested, and you cannot blame them.

Your County Commissioners are acting under instructions given them by the Monroe County Board of Supervisors at a meeting held at Monroe, Michigan, on October 19th, 1919. The only way you can get your Threshing done this Fall is to act as follows:

second floors. They filled the rooms, they thronged the corridors, they crowded the stairs. Every time a furtive-looking supervisor stepped out a door, he was confronted by a dozen familiar faces. These faces wore a grim look.

The farmers overflowed into the courtyard and the streets. After a hasty conference, it was decided to hire a theatre.

Here we quote from a letter that was written to us by Mr. Walker:

"Shortly after our arrival, the supervisors filed in and took their places on the stage, where we had installed Mr. Kirocofe as chairman of the meeting. With the meeting ready to proceed I happened to walk down the aisle and got the best ovation I ever got. It made me feel sort of queer, too. I had to make a little opening talk and then we were off.

"After about a dozen of the farmers and threshermen had warmed up matters to the boiling point, I suggested to the chairman that probably the supervisors had made up their minds what action they wished to take. To make a long story short, they decided to vote then and there on the subject; when the smoke had cleared away they had a resolution drawn up revoking their former action, giving the threshing outfits the same rights on the roads as heretofore, so far as Monroe County was concerned. When the vote was taken, it was found that the action had carried unanimously.

"Our farmers filled that theater and they were standing in the rear, so that I would place the attendance at a minimum of six hundred; and those supervisors simply read the handwriting on the wall. They 'came across.'

"I will say this much for the supervisors; they were much more gentlemanly than the road commissioners were to us, although our numbers may have had something to do with it. They wanted to be fair, and we have no complaint to make now that it is over and we have won.

"When the vote was announced, 'always-ready' Parker suggested a rousing three cheers all the way round and it sure was a sight for you. A meeting for threshermen only was then announced, and seventy by actual count stayed. A Monroe County Threshermen's association was formed, with the following members as officials: Fred Mayers, Petersburg, Michigan, president; Philip Wolhrobenstine, Petersburg, Michigan, vice president, and Elmer Blair, Temperance, Michigan, secretary-treasurer.

"I think things will be watched more closely in this county of Michigan at least; and in the future I hope a fight of this sort will be unnecessary."

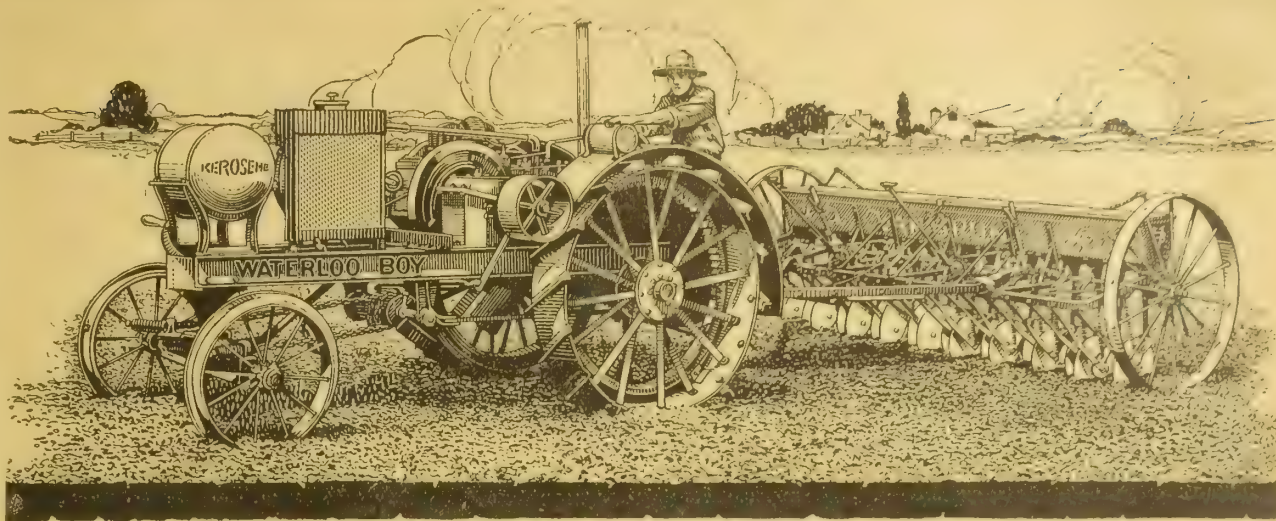
We hope, like Mr. Walker, that these fights will not be necessary. Until the farmers realize where their true strength lies, in organizing against a few court-house politicians, it is likely a fight will be necessary now and then. Under another head, you will read of how Mr. Dickey, secretary of the Michigan Association, was unable to get support from the men who should help him. He had no big issue of local interest with which to reach the threshermen and they failed to answer his stirring message for coöperation.

It seems to take a war to awaken the average American farmer. If a county "war" calls you in your community, don't be a slacker. Just the fact that six hundred farmers were present was enough to win for them the Monroe fight.

Michigan Fails to Respond

Most men agree that it pays to advertise. Mr. B. A. Dickey, of Michigan, has his doubts about this. On April 28, last, he sent an interesting letter to thirty-two hundred threshermen of the state of Michigan. This letter mentioned the success of the Michigan Threshermen's convention and the work accomplished by the Association committee, which prevailed upon the Board of Boiler Rules to exempt from inspection all boilers used for agricultural purposes. As Mr. Dickey pointed out, this ruling was worth between twenty-five dollars and fifty dollars in cold cash to every tractor owner in the state.

In closing his letter, Mr. Dickey spoke of the hard fight ahead of the Association, relative to the Road Law. The executive committee had decided to raise the Association dues



Service That Satisfies— Ask Any User.

THE dependable performance and economical operation of the Waterloo Boy Tractor back up the good buying judgment of its many owners. For more than five years it has been "making good" in the hands of thousands of satisfied users. Users have found that they can count on the Waterloo Boy to give them real service.

WATERLOO BOY

BURNS KEROSENE COMPLETELY

Talk to a farmer who owns a Waterloo Boy. Ask him about his tractor. He will tell you about the dependable power of the 12-25 H.P. engine, and that it satisfactorily performs year 'round, heavy duty service. He will tell you that you can bank on that engine to stick with you when the work has piled up and everything needs doing at once—that it "sees him through."

Ask him what it costs to run the Waterloo Boy. His figures will surprise you. An average of two gallons of kerosene per acre in plowing. A gallon and a half per hour on

belt work. Two quarts of lubricating oil per ten hours work.

The Waterloo Boy is extremely simple in construction. Conveniently placed inspection plates make it easy to get at all parts from a standing position. A drawbar shifting lever gives you the correct hitch on all tools, eliminating side draft. A pump, fan and radiator insure positive cooling, and hold the motor at the proper running temperature.

There are many other features of Waterloo Boy economy and service. Investigate the Waterloo Boy before you buy.

Write for our booklet fully describing this practical, economical tractor. Send a postal card today. Address John Deere, Moline, Ill., and ask for package WB-82

JOHN DEERE



THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS



Threshermen's Wagon Tank

Note Carefully Its Construction

The only wagon tank which rocks on front bolster to prevent twisting of tank. Others looking like this are imitations of our work. Over 8,000 sold in eight years, and without a complaint. A card to us brings you full particulars of the best wagon tank made. Get our big list of agents who say so. Below we give a few agents.

PIONEER MFG. CO.
Box 110 Middlebury, Ind.

AGENTS

Port Huron Engine & Thresher Co., Port Huron, Mich.
Southwestern Port Huron Co., Peoria, Ill., and Wichita, Kans.
Port Huron Machinery Co., Des Moines, Ia.
Port Huron Mach'y Co., Minneapolis, Minn.
Kenney Machinery Co., Indianapolis, Ind.
Sachse & Bunn Co., Cherokee, Ia., and Sioux City, Iowa.
Wichita Supply Co., Wichita, Kans.
Quick & Thomas Co., Auburn, N. Y.

"As a Matter of Fact" says the Good Judge

It will actually cost you less to use the Real Tobacco Chew.

Any man who uses the Real Tobacco Chew will tell you that.

The full, rich taste lasts longer—and a small chew gives more genuine satisfaction.



Put up in two styles

RIGHT CUT is a short-cut tobacco

W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York C

Steam Power Keeps the Outfit Going

The thresherman with a Nichols-Shepard steam engine is sure of keeping his outfit going. His power is dependable—easy to operate, and runs steady, which means good results and better pleased customers. It will run on almost any fuel and operates at a minimum of expense. Steam is the most dependable power known.

There are less chances for trouble with a steam engine, and if troubles do occur you can remedy them yourself and avoid long shutdowns. The

Nichols-Shepard Steam Engine

has proved its leadership through many years of service. It is built by men who have made a life specialty of building threshing outfits. Men who know from experience what the thresherman and his customers want. Built in Single and Double cylinder—front and rear mounted—16 horse, 20 horse and 25 horse sizes.

Wm. Reitmeir of Crookston, Minn., says: "I have a Nichols-Shepard Steam Engine and a Red River Special Separator, run for the past 18 years, and the way the outfit is running this season I believe it will last 18 years more."

Write and let us tell you more about this popular threshing power. Ask for our catalog.

Also let us tell you about "Red River Special" Threshers—all sizes. Write for Circulars.

Nichols & Shepard Co.

In Continuous Business Since 1848

Builders Exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines

Battle Creek, Mich.

to three dollars. He asked the threshermen to support the organization in their fight for the good of the industry.

Mr. Dickey got thirty replies to his thirty-two hundred letters. About twenty joined the Association and ten wrote refusals to Michigan's invitation. No wonder Mr. Dickey has become discouraged about this Direct-by-Mail System.

Meetings in Ohio

The Mansfield meeting of the Ohio threshermen was well attended; as it met on May 25, the lateness of the season tended toward a small attendance. One of the striking features of the meeting was that it was one hundred per cent so far as membership in the Ohio Brotherhood of Threshermen is concerned; these local meetings throughout Ohio are doing wonders toward getting the threshermen into the fold. Tom B. Walker of Toledo acted as chairman, showing his usual "pep."

"Old Reliable" J. B. Parker, of The American Thresherman and Farm Power, gave one of his enterprising speeches. These cannot help but get the threshermen enthused with the proposition in hand. His talks on the "Origin of Organization," as it pertains to threshing, are full of interest to everyone; they all appreciate what he and "Old Sile" have done for them.

George Durban, secretary of the Ohio Brotherhood, gave a rousing talk on the "Perils Confronting the Threshing Business of Ohio." This was well received. Brother Durban is surely a strength to the Ohio organization, and they should never permit him to quit his job; he is talking of doing this, owing to business interests elsewhere.

A. T. Reynolds, of the Aultman-Taylor Machinery Company, gave a very helpful talk on "Local Organization"; following his address, the Richland County officers took charge of the meeting and carried it on as a local meeting.

At the suggestion of Mr. Reynolds, the Richland County organization, through its president, appointed a Membership Committee, consisting of one thresherman each in the north, east, south and west of the county. Its duty is to persuade threshermen not in the organization to join. Without a doubt this method will do much good in Richland County. Before the organization adjourned, all old officers were re-elected.

The Chillicothe meeting was called to order at 1:30 P. M. May 27, in the Odd Fellows Hall, by Tom B. Walker, who was chosen as chairman.

The session opened with an address by George Durban, secretary of the Ohio Brotherhood of Threshermen. His subject was: "What Has Been

Accomplished by the Ohio Brotherhood of Threshermen." Mr. Durban surely has his work lined up in fine shape, and has one of the smoothest-working organizations in the country. The outline of the work done by the Ohio Brotherhood of Threshermen is always most interesting to the threshermen, and they are usually so interested that the meetings are concluded with one hundred per cent membership. Most any man hates to let the Brotherhood carry the burden for him, when he has not contributed toward its support; and Durban surely can tell them what has been done for them.

Hon. J. B. Parker of The American Thresherman and Farm Power was on hand as usual, and gave a stirring talk on "Organization." The only difference between Parker and Billy Sunday is that they chose different lines of work; when it comes to getting them "up front" they are in a class by themselves. The boys all appreciate his earnest endeavor, and as he always has a new joke or two to tell them, he is the best medicine a meeting can have. It could well be said that a meeting is a failure without him.

The vice president of the Ohio organization, Mr. C. M. Drummond, then gave a fine talk on "Needful Laws." He spoke particularly upon the need of good bridge laws in Ohio, as well as the need of some kind of a lien law. His remarks were worthy of further consideration.

The announcement was made by the local organization that a meeting would be held at the same place on the second Saturday in June, to consider local matters.

The organization in this section is superior to many local organizations. This is largely due to the aggressive work of Mr. Drummond.

Maryland

Reorganization of the Maryland Threshermen's and Farmers' Protective Association was effected at a meeting held in Frederick some time ago. W. H. Newson, of Elizabethtown, Indiana, president of the National Association of Brotherhoods of Threshermen, presided. He explained the purpose of the meeting and the causes and events which led to its being called; after this, he gave an extensive summary of the accomplishments of the State Threshermen's organizations in other states.

Mr. Kellogg, of New York, was called upon; he gave an excellent talk upon the accomplishments of the New York Brotherhood. J. B. Parker, of The American Thresherman and Farm Power, then gave a talk on the importance of organization.

J. A. Rose, secretary of the Pennsylvania Association, spoke on the State Road law in Pennsylvania,



A Perfect Day for Threshing —But No Threshing

SPLENDID WEATHER FOR THRESHING—the grain is right—the men and teams are ready—but the old leather covered drive pulley has “stripped” again and threshing is delayed until the pulley can be repaired.

Here's the costliest kind of idleness—a sheer waste of money, time and equipment! And it all comes out of your pocket, Mr. Thresherman—a loss that can be easily prevented by using Rockwood, *The Drive Pulley*.

Rockwood, *The Drive Pulley*, is now recognized by threshermen as the *only* drive pulley that will deliver the maximum power of the engine to the thresher cylinder—that will insure uniform threshing speeds and will eliminate excessive belt slip and belt wear—that will give steady, dependable service no matter how wet and tough the straw may be—that will go through year after year of heavy duty, and with neither trouble to you nor expense for repairs.

You should have Rockwood, *The Drive Pulley*, on *your* machine. Many prominent manufacturers now supply it as standard equipment on *new* machines. If your *old* thresher does not have it, order through your dealer or we will supply you direct.

Write today for free descriptive booklet giving prices, sizes and full information about Rockwood, *The Drive Pulley*.

THE ROCKWOOD MFG. CO. - 1926 English Ave., Indianapolis, Ind.



ROCKWOOD *The DRIVE PULLEY*

[with section removed to show construction]

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and WEARS.

Rockwood, *The Drive Pulley*, has no “cover” to strip. It is ALL pulley, and is thoroughly waterproofed.

All the Power—All the Time

ROCKWOOD, PULLEY SERVICE

COST LESS—LAST LONGER

HOO-HOO Belting is made from extra heavy duck and has four rows of stitches to an inch. It is treated with a special compound that keeps it at all times pliable and unaffected by unnatural conditions, such as water, steam, heat, acid fumes, etc. It will not crack or harden and is of strictly uniform quality, carefully stretched and seasoned before leaving factory.

HOO-HOO Belting will transmit the maximum power, stand an unusual amount of abuse, which enables you to thresh more grain per hour. It is the highest class thresher belt manufactured.



GUARANTEE

Belts should be run in the center of the pulley and should not be held in place by any object that will injure or break the edges.

Results of overloading, injurious use of belt dressings, or chafed, frayed or nicked edges do not constitute defects.

Positively no allowance unless claims are made within 30 days from date put in use and belt returned to maker, freight prepaid, with the guaranteed tag attached.

We will replace any belt proving defective in material or workmanship.

HOO THRESHER

HOO BELTS

Net Cash Prices

Lgth. Ft.	Width In.	Ply	Each	Lgth. Ft.	Width In.	Ply	Each
50	5	4	\$22.05	100	7	4	56.25
50	6	4	25.65	100	8	4	63.45
75	5	4	31.95	125	6	4	61.20
75	6	4	37.35	125	7	4	69.75
100	5	4	42.30	125	8	4	78.75
100	6	4	49.50	150	7	4	83.25

Net Cash Prices

Lgth. Ft.	Width In.	Ply	Each	Lgth. Ft.	Width In.	Ply	Each
150	8	4	93.60	160	8	5	124.65
150	9	4	103.50	160	9	5	137.25
125	7	5	87.30	150	8	6	140.85
125	8	5	98.10	150	9	6	155.25
150	7	5	103.95	160	8	6	149.85
150	8	5	117.45	160	9	6	165.60
150	9	5	129.15				

Terms, cash to accompany order. Freight prepaid.

Terms, cash to accompany order. Freight prepaid.

If interested, we shall be pleased to quote prices on "HOO-HOO" Canvas Stitched Belting in Rolls, Oak Tanned Leather Belting and Lace Leather. Also any length, width or ply endless belt not mentioned above. 5% discount for group purchases of five or more belts.

Please Mention Length, Width and Ply Required

National Leather Belting Company, 342 East Thirty-Eighth St. New York City

Mention The American Thresherman and Farm Power

stating that the bridges there were guaranteed to carry twenty-eight hundred pounds and that traction engines had the same privileges on the state roads as horse-drawn vehicles. Mr. Fry of the J. I. Case Threshing Machine Company, gave a talk on the importance of organizing the threshermen.

The association then organized by electing the following officers: Geo. E. Nicholson, Olney, president; Charles D. Oland, Adamstown, vice president; Chas. W. Harp, Myersville, treasurer; Wm. H. Renn, Adamstown, secretary. Executive Committee, Clarence B. Rice, Trappe; Clarence E. Burriss, Reckville; H. G. Baker, Frederick; George E. Nicholson, Olney; Wm. H. Renn, Adamstown.

It was voted that all the members of this organization join the National Association of Brotherhoods of Threshermen. George E. Nicholson was elected a delegate to the National Association to be held at Chicago.

Maryland threshermen will be especially interested in the Tri-State fair to be held this fall at Hagerstown, also in the York, Pennsylvania, fair.

If you are trying to pull a heavy load and the drivers are beginning to slip badly, be sure to stop immediately.

Trucks Run 250 Miles a Day

A new world's record for thirteen days, five hours for the 3,500 mile transcontinental trip from Los Angeles to New York has been made by a pneumatically equipped motor truck of the Goodyear Tire & Rubber Company.

The previous record of seventeen days and three hours was established in 1913 by a light weight Maxwell truck. When the three-ton Packard that had hung up the new coast-to-coast record rolled into New York City, it had traveled from Atlantic to the Pacific four times since 1918 and rolled a total of 130,000 miles.

Driven by Howard Sholder and Herbert Temple, the big freighter traveled two thousand miles over the Santa Fe route to Kansas City in eight days and thirteen hours despite thirty-two hours lost because of bad roads and detours in New Mexico.

Just twelve days after leaving Los Angeles, the big truck rolled into the factories at Akron—a distance of two thousand nine hundred miles. The drivers relieved each other every six hours, one sleeping in a comfortable cab behind the driver's seat, while the other drove.

The truck made its first transcontinental run from Boston to San Francisco in September, 1918—3,700 miles in twenty-one days. The same truck traveled with an army trans-

port train over the Lincoln Highway in 1919 and since then has been giving demonstrations along the Pacific coast.

Company officials believe that the new record, with its average daily run of two hundred and fifty miles, will stand for some time.

Prominent Fairs, 1920

	Secretary
ALABAMA, Alabama State Fair, Birmingham, Oct. 4-9	J. L. Dent
CALIFORNIA, California State Fair, Sacramento, Sept. 4-12	Chas. W. Paine
COLORADO, Colorado State Fair, Pueblo, Sept. 19-25	J. L. Beaman
COLORADO, National Western Stock Show, Denver, Jan. 1921	Fred P. Johnson
CONNECTICUT, Connecticut State Fair, Hartford, Sept. 6-10	Will P. Landon
GEORGIA, Georgia State Fair, Macon, Oct. 28-Nov. 6	Harry C. Robert
GEORGIA, Southeastern Fair Association, Atlanta, Oct. 16-26	R. M. Striplin
IDAHO, State Fair of Idaho, Boise, Sept. 21-25	O. P. Hendershot
ILLINOIS, Illinois-Indiana Fair, Danville, Aug. 29-Sept. 4	Geo. M. McCray
ILLINOIS, Illinois State Fair, Springfield, Aug. 20-28	B. M. Davidson
ILLINOIS, Kankakee Inter-State Fair, Kankakee, Aug. 24-28	Len Small
ILLINOIS, National Dairy Show, Chicago, Oct. 7-26	W. E. Skinner
INDIANA, Indiana State Fair, Indianapolis, Sept. 6-11	Charles F. Kennedy
IOWA, Iowa State Fair, Des Moines, Aug. 25-Sept. 3	A. R. Corey
IOWA, Inter-State Fair, Sioux City, Iowa, Sept. 19-25	D. V. Moore
KANSAS, Kansas Free Fair, Topeka, Sept. 13-18	Phil Eastman
KANSAS, Kansas State Fair, Hutchinson, Sept. 18-24	A. L. Sponsler
KANSAS, International Wheat Show, Wichita Fair and Exposition, Wichita, Kansas, Oct. 4-16	
KENTUCKY, Kentucky State Fair, Louisville, Sept. 7-11	Henry B. Marks
LOUISIANA, Louisiana State Fair, Shreveport, Oct. 28-Nov. 7	F. T. Kremer
MASSACHUSETTS, Eastern States Exposition, Springfield, Sept. 19-25	W. R. Hirsch
MICHIGAN, Michigan State Fair, Detroit, Sept. 1-6	J. C. Simpson
MICHIGAN, West Michigan State Fair, Grand Rapids, Sept. 20-25	C. W. Dickinson
MINNESOTA, Minnesota State Fair, Hamline, Sept. 4-11	L. A. Lilly
MINNESOTA, St. Paul Union Stockyards Co., So. St. Paul, Minn., Sept. 29-30	T. H. Canfield
MISSISSIPPI, Mississippi State Fair, Jackson, Oct. 19-24	L. W. Kulee
MISSISSIPPI, Mississippi-Alabama Fair, Meridian, Miss., Oct. 11-16	Mabel L. Stire
MISSOURI, Missouri State Fair, Sedalia, Aug. 14-21	A. H. George
MONTANA, Midland Empire Fair, Billings, Sept. 21-24	E. G. Bylander
MONTANA, Montana State Fair, Helena, Sept. 13-18	R. H. Cosgrove
NEBRASKA, Nebraska State Fair, Lincoln, Sept. 5-10	Horace P. Ensign
NEW JERSEY, Inter-State Fair, Trenton, Sept. 28-Oct. 2	E. R. Danielson
NEW YORK, New York State Fair, Syracuse, Sept. 13-18	M. R. Margerum
NEW YORK, Rochester Exposition, Rochester, New York, Sept. 6-11	J. D. Ackerman
NORTH DAKOTA, Inter-State Fair, Fargo, July 12-17	E. F. Edwards
NORTH DAKOTA, North Dakota State Fair, Grand Forks, July 20-24	F. W. McRoberts
OHIO, Ohio State Fair, Columbus, Aug. 30-Sept. 4	Don V. Moore
OHIO, National Farmers' Exposition, Toledo, Ohio, Dec. 2-10	E. V. Walborn
OKLAHOMA, Oklahoma Free State Fair, Muskogee, Oct. 4-9	H. V. Buelow
OKLAHOMA, Oklahoma State Fair, Oklahoma City, Sept. 25-Oct. 2	Ethel M. Simonds
OREGON, Oregon State Fair, Salem, Sept. 21-26	I. S. Mahan
OREGON, Pacific International Live Stock Exposition, North Portland, Nov. 17-23	A. H. Lea
PENNSYLVANIA, The Great Allentown Fair, Allentown, Sept. 20-25	O. M. Plummer
PENNSYLVANIA, Erie Exposition Association, Erie, Aug. 19-24	Harry B. Schall
PENNSYLVANIA, Pennsylvania's York Fair, York, Penn., Oct. 5-8	C. R. Cummins
SOUTH DAKOTA, South Dakota State Fair, Huron, Sept. 13-18	H. C. Heckert
TENNESSEE, Chattanooga Inter-State Fair, Chattanooga, Oct. 2-9	C. M. McIlvaine
TENNESSEE, Memphis Tri-State Fair, Memphis, Sept. 25-Oct. 2	Jos. E. Curtis
TENNESSEE, Tennessee State Fair, Nashville, Sept. 20-25	Frank D. Fuller
TEXAS, Texas State Fair, Dallas, Oct. 19-24	J. V. Russwurm
UTAH, Utah State Fair, Salt Lake City, Oct. 4-9	W. H. Stratton
VERMONT, Vermont State Fair, White River Junction, Sept. 28-Oct. 1	D. W. Parratt
VIRGINIA, Virginia State Fair, Richmond, Oct. 4-14	F. L. Davis
WASHINGTON, Spokane Inter-State Fair, Spokane, Sept. 6-11	W. G. Saunders
WASHINGTON, Washington State Fair, North Yakima, Sept. 20-25	J. H. T. Smith
WASHINGTON, Western Royal Live Stock Show, Spokane, Nov. 4-8	G. C. Finley
WISCONSIN, Wisconsin State Fair, Milwaukee, Aug. 30-Sept. 4	W. L. Tennant
WYOMING, Wyoming State Fair, Douglas, Wyoming, Sept. 14-17	Oliver E. Remy
	E. Ewel

Paid for Selves in 18 Months

The Following Letter Tells the Story

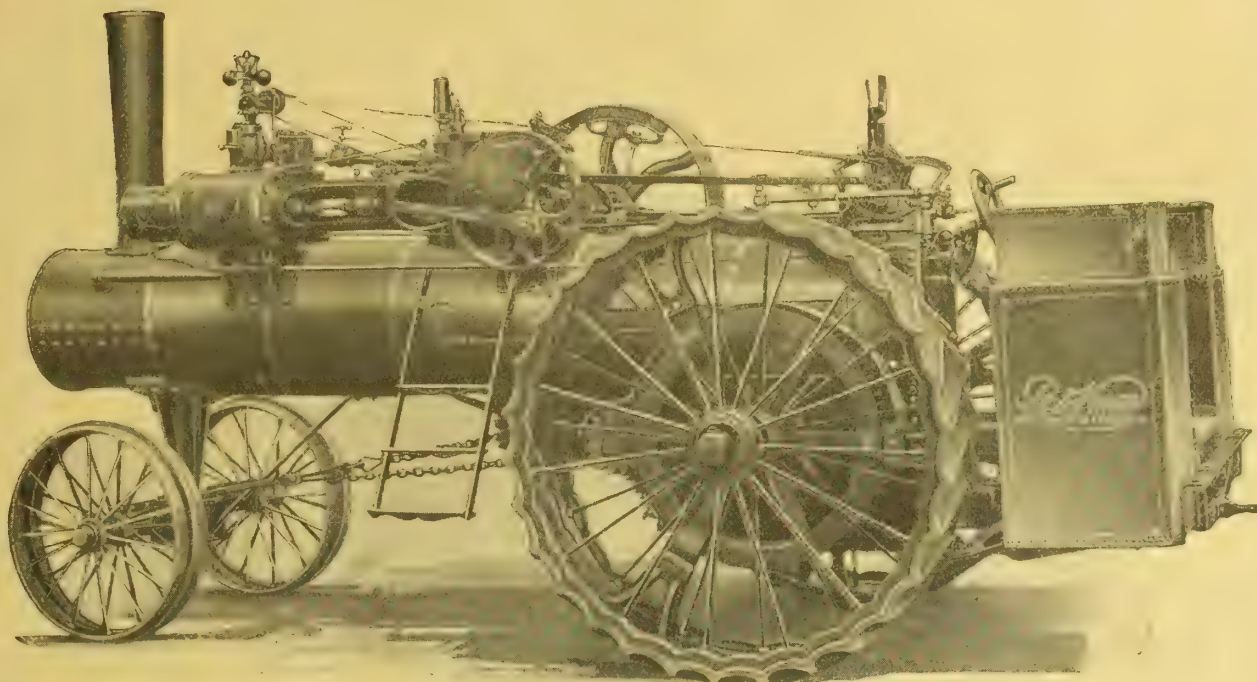
READ IT

"In 1916 I invested in a new Port Huron threshing outfit and had it paid for in eighteen months," wrote Harry D. Weigle of Nachusa, Illinois, in a letter to us dated April 4th, 1920. He further said:

"I have threshed for many farmers who had had other makes of machines thresh for them, and when I finished their threshing they said it was the best job they'd ever had done. The grain was threshed out of the straw and separated from it and delivered in the wagon box clean enough to take out in the field and sow.

"The 'Rusher' thresher surely saves the farmers' grain, and the 'Longfellow' Compound engine has made substantial savings on their coal bills, which they are quick to notice and not slow in telling about.

"I have found Port Huron Machinery to be just what it is recommended and the Company back of it always on the alert to see that things are going right."

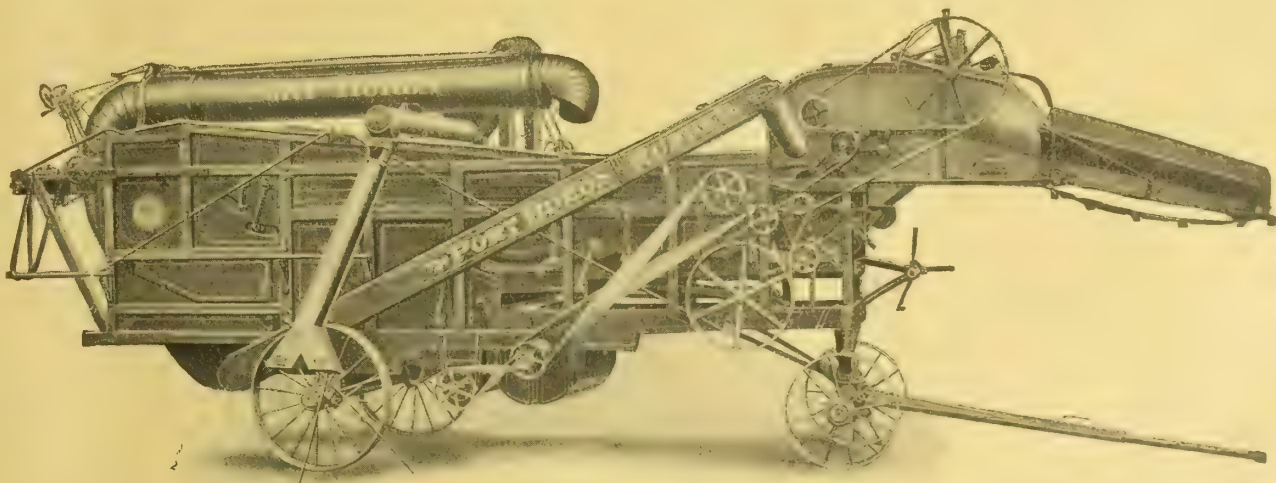


PORT Huron Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market to-day. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them.

PORT HURON LONGFELLOW HIGH-PRESSURE COMPOUND—2 SIZES, 19 and 24 H. P.

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor-Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.

The famous Mule-Kick Separation beats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing.



PORT HURON RUSHER WITH MULE-KICK SEPARATION AND RAZOR-BACK TEETH

Port Huron Engine & Thresher Company, Inc.

Port Huron, Mich.

Port Huron Co. of Illinois
Peoria, Ill.

Port Huron Mach'y Co., Ltd.
Des Moines, Iowa

Port Huron Engine & Thresher Co.
Wichita, Kansas
Port Huron Engine & Thresher Co., Logansport, Ind.

Port Huron Mach'y Co., Ltd.
Minneapolis, Minn.

Port Huron Mach'y Co., Ltd.
Lincoln, Nebraska



Solid Belt Dressing

IT'S easy to keep belts from slipping. All it takes is a little common sense care and a good belt dressing.

But be sure to pick the right dressing—Dixon's—and stick to it. For a poor substitute is worse than none at all.

Dixon's Solid Belt Dressing keeps the belts in good working condition. Its good properties preserve the fabric and its pliability, prevent slippage and make for better transmission.

Comes in handy bars, easy to apply. Try it—not to please us but to be pleased yourself. Free sample on request.

Write for booklet, No. 22-O, "The Proper Care of Belts." It's mighty interesting.

JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, NEW JERSEY
Established 1827

Mention The American Thresherman and Farm Power

Uncle Silas

"HE kept us out of war," now he's keeping us out of peace.

WISHING a man well is mighty nice, but giving him a "boost" buys more milk tickets.

THE nearest that William Jennings Bryan has been right politically for a long time, was when he had a seat in the Republican convention in Chicago last month.

WHEN men cuss you and abuse you and say all manner of evil against you, stop and take stock; maybe lots of it is true. That's how Sile has always found it in his case. The men who abuse Sile most are his best friends, even if they think they're not.

YES, Uncle Gompers condemned the Republican platform because it doesn't give his crowd the right to freeze and starve folks when they decide on a rule or ruin policy of its own. Labor is entitled to all that capital is entitled to but no more. If capital had undertaken to do what the coal miners tried to do last winter, the leaders would have heard from the people in an entirely different manner than was shown towards the autocrats of the "starvation" and "freeze-out" plan.

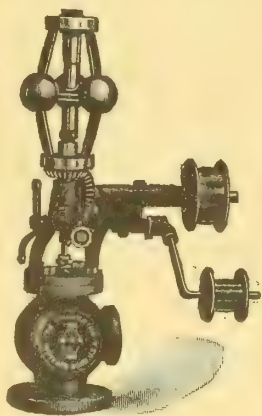
IF anybody doesn't like the political trend of the few scatterin' remarks on this page, just pass it by and credit Sile with bein' cranky. You get your money's worth in the things which you do like in every issue and Sile, having helped the threshermen to build up their organization, wants to treat everybody right, and it should be apparent by this time, even to a blind man, that this is no country to be ruled by a party which uses a jackass for a trademark and follows its traditions in all things. It may be a little solace to the brethern of other political faiths to learn that with all his faults Silas has also voted the Democratic ticket in Wisconsin from "gut to guzzle." That's why Sile is sore. "Quoth the raven, Nevermore."

THE automobile fellows have so far forgotten the highway of good business in their prosperity that they have, in many cases, entered the field of "wildeat" business, selling thousands of cars, it is said, on the payment of one hundred dollars down and the balance in monthly payments, sorter after the manner of certain working girls buying eight hundred dollar fur coats in the winter and letting the moths get 'em in summer. The day once was when threshing machinery could be bought in the same way but not any more, thank the Lord. The automobile fellows, drunken in their prosperity, seem to think that the end will never come but the Federal banks, backed by other banks, are using bricks and mortar right now building a stone wall against this kind of "kiting" in the business world. Unless common sense prevails and men are educated to conserve gasoline instead of squandering it beyond any approach to reason, we'll find ourselves "bone dry" on gasoline as well as on whiskey, and the former will be worse than the latter.

THERE are two things about politics that don't appeal to me, one being the wishy-washy policy of trying to please everybody in a party platform and the other is in having women mixed up with it. Women are becoming mannish fast enough without being taught the tricks and rascality of men in party politics. There are as many women swearing today as there were men doing the same thing forty years ago. They won't elevate politics, but woman will lower her own standing in her sphere by becoming mannish in so many ways. She smokes cigarettes, she swears and she cheats in politics, as men do, or she's a piker, one of the six.

The last Republican convention, I might say the last senatorial gathering of the Republicans, shows the deceit, the cheating and the insincerity of men. Their platform is a long ways from being a counterpart of the Declaration of Independence. They played the part of hypocrites to hold together such other hypocrites as Hiram Johnson and his class of reformers, who threaten to bolt everything that doesn't suit them. Hiram Johnson has to answer for the sin of imposing the last administration on the people, yet he must be coddled when he deserved a kick. Let us pray for Harding and Coolidge that they at least overthrow the infamous policy now thrust upon us by the Democratic mules, jackasses, cotton speculators and sugar price boosters.

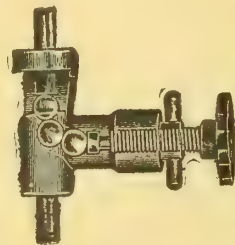
Now, if the Republican party will clean house and cut off all representation of "poor white trash" and "non-voting niggers" south of the Mason and Dixon line, until they can show forth "fruit meet for repentance," and who control conventions where they can't deliver one electoral vote, we'll have better times in America.



PICKERING "THE GOVERNOR WITHOUT JOINTS"

Equipped with
**Ball Ranger
Speed Changer**

*Fitted to every
build of Engine*



The standard Governor for Threshermen, because giving wide range in Speed Adjustment, and close regulation.

The most durable Governor requiring least attention.

**PICKERING
Oil Pumps**
Simple and Reliable

Write us for particulars.

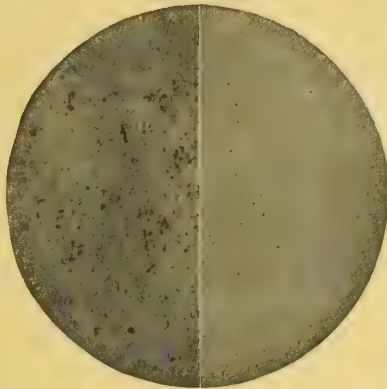
**The PICKERING
GOVERNOR CO.**
Portland, Conn. U. S. A.



Mention The American Thresherman and Farm Power

INCREASING MAXIMUM HORSE-POWER

Used Oil as seen through the microscope. Note the grit and punctures in the film.



Fresh oil as seen through the microscope. Note the smooth, unpunctured film.



There is a very definite relation between a tractor's lubricating system and the maximum power it develops under load.

On a four cylinder motor, fresh oil lubrication can increase the maximum operating load by more than one-sixth.

Comparative tests that established this fact during the last year were made with a typical, standard, four-cylinder motor.

First it was equipped with a regulation crank-case system that used its oil over and over.

With this system 27.25 horse-power was the maximum operating load.

Then the motor was equipped with a Madison-Kipp fresh oil system.

Its maximum operating load increased to thirty-two horse-power—or more than one-sixth.

While effecting this increase in power, the fresh oil system reduced the amount of kerosene required for each horse-power hour by 13½%—more than one-eighth.

And oil costs were reduced 83%.

These and many other tests are available for inspection to any one interested.

Similar results have for years been demonstrated in the field by tens of thousands of two cylinder tractors

The natural consequence is a decided preference for Kipp-Equipt motors among experienced tractor users.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators

**Fresh
Oil
Systems**



It's a cinch to figure out why Camels sell

Camels are unlike any cigarette you ever smoked—that's why they're a real cigarette revelation!

You should know why Camels are so unusual, so refreshing, so satisfying. *First*, quality—*second*, Camels expert blend of choice Turkish and choice Domestic tobaccos which you'll prefer to either kind smoked straight!

Camels blend makes possible that wonderful mellow mildness—yet all the desirable body is there! You'll appreciate, too, Camels freedom from any unpleasant cigarette aftertaste or unpleasant cigarette odor.

Compare Camels puff - by - puff with any cigarette in the world at any price!

Camel

CIGARETTES

Camels are sold everywhere in scientifically sealed packages of 20 cigarettes for 20 cents; or ten packages (200 cigarettes) in a glassine-paper-covered carton. We strongly recommend this carton for the home or office supply or when you travel.

R. J. REYNOLDS TOBACCO CO., Winston-Salem, N. C.

Correspondence

I believe your magazine is great for any young man starting in the machine business. I am sending my renewal for five years. I am an old thresherman—not so very old either, although I have threshed sixteen falls. I am sending you a picture of

team to pull the same load as a heavy draft team.

I also have a 45-horse power Mogul tractor which I now have for sale, as I have bought a larger one and do not need this one. I am proud of my tractors for they are a



Wood Brothers' Separator and Reeves Engine Used by Ralph Stroup.

my threshing outfit. It is a Wood Brothers' separator and a Reeves engine. I am well pleased with these machines.

RALPH STROUP.

Albion, Neb.

I have a 90-horse power Twin City tractor, a 40x62 Case separator and an eight-bottom John Deere plow. I find the tractor to be a big help for fall plowing. I plow from six to nine inches deep. I notice where I plowed my ground deep and early my wheat looked twenty per cent better. I will say this to a farmer who is in the market for a tractor, do not buy too small a tractor if you intend to do deep plowing in the fall. I put a ten and one-half foot harrow behind my eight fourteen-inch plows to harrow the land when it is fresh and loose. I find that where there is extra tractor horse power the tractor will last longer and give less motor trouble. I believe in pulling tractor motors the same as a team of horses. No farmer expects a small carriage

mighty big help to me. I would not go back to horses unless I cut down the size of my farm, which is two hundred and seventy-nine acres. Of course, I would not give up all my horses, but by using the tractors I can relieve the horses of the heavy work and I do not need so many. A person can make better time with a tractor for it does not have to stop at the ends of the rows to get its breath. No matter how hard, hot or dry the ground gets, the tractor is right there ready to do the work.

I have threshed for seven years. I get nine cents for wheat, five cents for oats, ten cents for rye and I furnish the kerosene and oil.

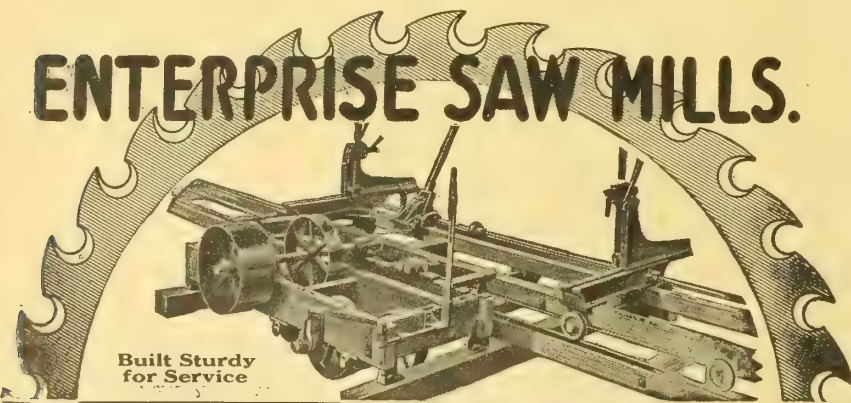
New Berlin, Ill. J. W. GERHARDT.

I threshed by the hour this fall and received twenty-five dollars an hour with ten bundle teams and straw teams in my outfit. I put in twenty-six and one-half days, which made a pretty good run for this year, as the crops were very poor in this



J. W. Gerhardt's Outfit Finishing Up the 1919 Threshing Season Near New Berlin, Illinois.

ENTERPRISE SAW MILLS.



Built Sturdy
for Service

Stands Up Under Long, Hard Strain

That's just one of the many reasons why its hundreds of satisfied users have such confidence in

ENTERPRISE SAW MILLS

Portable and Stationary

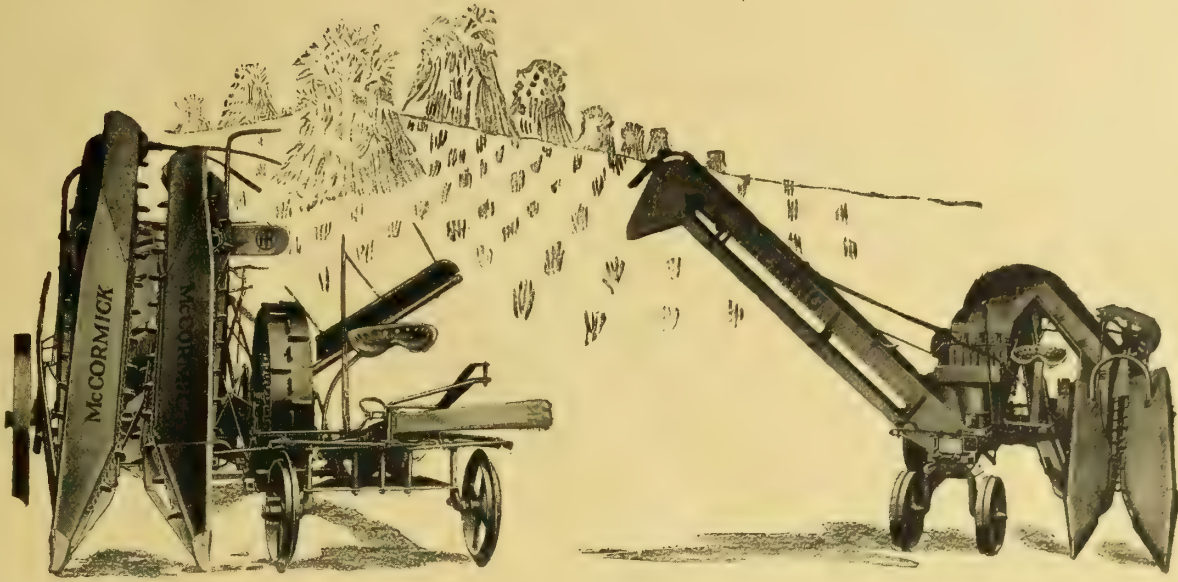
These mills are the result of 40 years' experience in saw mill building. They are fast, accurate, sturdy, and give such good service that they never fail to satisfy.

Built in eight different sizes described fully in catalog, sent free on request

The Enterprise Company, 1050 Main St., Columbiana, Ohio

Eastern and Export Office: 136 Liberty Street, New York, N. Y.
Makers of Saw Mill Machinery

McCormick, Deering and Milwaukee Corn Binders. Cut and bind 5 to 7 acres per day. Bundle carrier, elevator to load bundles on wagon, or special conveyor bundle carrier provided.



McCormick and Deering Corn Pickers. Pick and husk 5 to 7 acres per day. Elevator delivers husked corn into wagon driven alongside. Tractor or five horses, and one man, required.

KING CORN

and a glimpse into Corn-machine History

AUTUMN will bring into the markets of the world some three billion bushels of American corn. A great army of corn-harvesting machines is already mobilizing.

It is the purpose of this page to remind corn growers of the wonderful part played by this Company, and by the builders of McCormick and Deering, in the development of modern corn machines.

Cyrus McCormick invented the reaper and led the way from ancient hand-harvest to efficient binder-harvest. There is no news in that; every school child knows the historical fact. Less familiar but just as inspiring is corn-machine history. Here, too, forty years ago, the builders of this Company were pioneering.

Out of their hands in these two-score years have come such efficient corn machines as the binder, the picker, the husker-shredder; and the credit for today's high standards belongs to the International builders. Now corn has come from its lowly state to be crowned *King Corn*, and the tiny crop of 1880 has grown to a three-billion-bushel yield.

The careful corn grower will understand that the *steady accumulation of Harvester experience is important for him*. Whatever the need—for corn binder, picker, ensilage cutter, husker-shredder, sheller—International dealers the nation over may be depended on for corn machines whose practical utility is everywhere acknowledged.

International Harvester Company

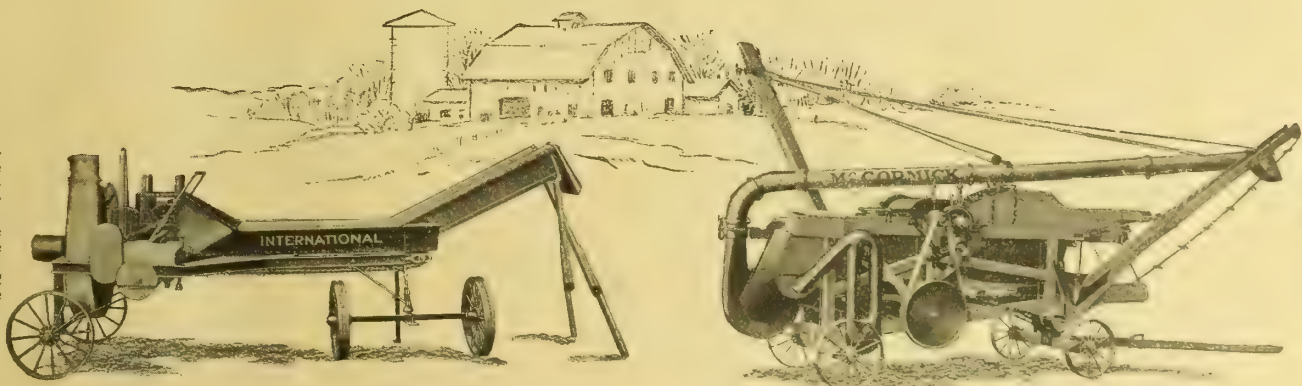
of America
(INCORPORATED)

Chicago

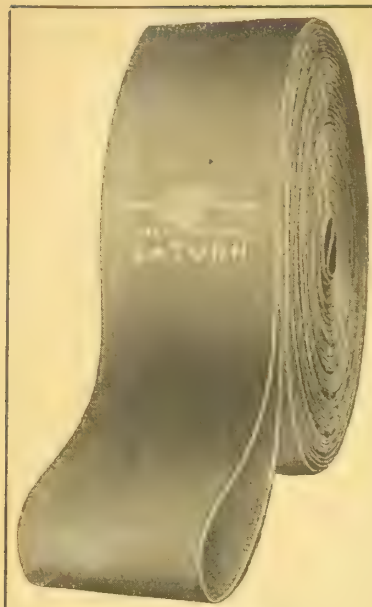
U S A

92 Branch Houses in the United States

International Ensilage Cutters. Made in five sizes. Capacities 3 to 25 tons per hour; 6 to 25 h. p. required. Reliable safety devices. Force feed, large throat. Heavy-duty wheels built of riveted boiler-plate steel plates.



McCormick and Deering Huskers and Shredders. Sizes 2, 4, 6, 8 and 10-roll. Small sizes for individual farm use and large sizes for custom work. Power required, 8 to 25 h. p.



Saturn Rubber Endless Thresher Belts

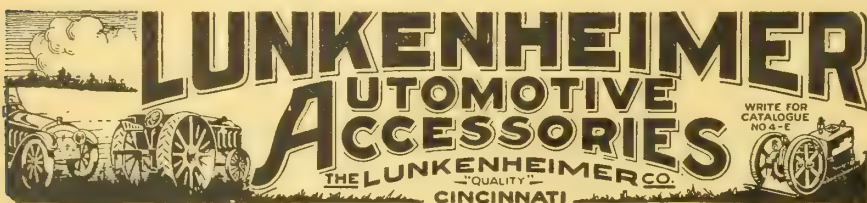
They do not
absorb moisture,
have minimum stretch
and long life.

If your dealer cannot supply you, address

The Gutta Percha & Rubber Mfg. Co.
303 W. Randolph Street, CHICAGO

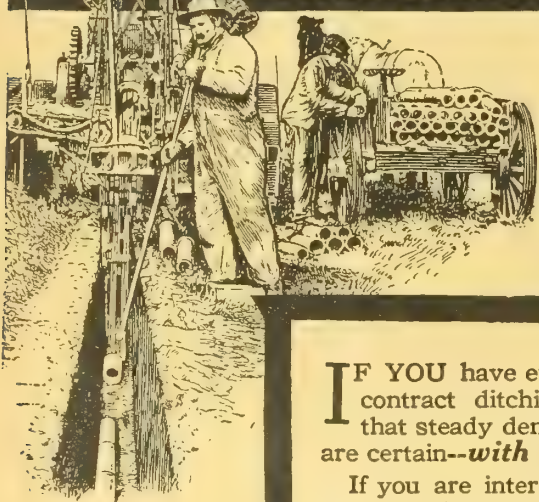
New York Chicago San Francisco
Boston Seattle

Mention The American Thresherman and Farm Power



Mention The American Thresherman and Farm Power

Contract Ditching A Big-Profit, Spare-Time Business for Farmers



Ed. Uvaas Made \$1900 in 84 Days' Work

I purchased one of your No. 1 tile ditching machines in April, 1915, and the gross earnings from 84 days' operation were \$2200. I paid out for help and supplies \$287.00, and my repair bills amounted to \$20. This netted me \$1902.00. My crew consisted of one man beside myself. I had never done contract tiling before getting your machine and my farm work took up considerable of my time.

ED. UVAAS, Larsen, Wisconsin

IF YOU have ever looked into the contract ditching field, you know that steady demand and big profits are certain--with the right ditcher.

If you are interested in getting the cream of the contracts in your vicinity, get in touch with us immediately. Whether you are an experienced contractor or just thinking of getting into the work, on either a full-time or part-time basis, get the facts regarding the

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

This machine is the undisputed leader under all conditions of soil and climate. It furnishes its own power. It cuts through hardpan and frost. It operates well in swampy land. It gives you 100 to 150 rods of ditch each day--every foot clean, smooth, true to grade and ready for tile or pipe.

Drop us a line today. Let us show you how others have become independent through this work--how you can do the same, right in your locality.

Free Book Tells How

Our interesting book, "Dollars in Ditches," will be sent to you on request. It shows what hundreds of others are doing with Buckeye traction ditchers. It tells how this big institution stands behind you. It describes the machine in detail. It shows the average prices charged and the average profits made.

A letter or post card will bring it free.

\$6,350 from one Season's Ditching for J. E. Griffith

I own and operate a No. 1 Contractor's Buckeye Ditcher and as an investment it cannot be beat. I recommend it to any one going into the business.

I have dug 268 rods in 10 hours, and I dug 18,370 rods earning \$6,350 during the 1918 season. During that time I was often held up by lack of tile, and harvest. I average 175 rods per day.

J. E. GRIFFITH,
London, Ontario.

R. W. Sherrard made \$71.00 in one day

On one job I cut 117 rods of ditch, averaging 42 inches deep, made four connections and two curves in one actual day's work, for which I received \$71. I passed the 41 mile mark of ditching with my machine on this job, and the machine is in A-1 condition. This, in a little over three years, and I have not run the machine one half the time, having other work to attend to.

R. W. SHERRARD,
Rochester, Indiana.

The Buckeye Traction Ditcher Co.
196 Crystal Ave. Findlay, Ohio.

Mention The American Thresherman and Farm Power



A Rig Which Charles R. Froelich Says Is Good for North Dakota Conditions.



Tractor and Cook Car Used by Charles R. Froelich Last Fall.

section. I would much rather see better crops so we could thresh by the bushel than to thresh by the hour. I used a 12-25 Avery tractor to move my cook car. I am sending you a picture of the tractor and cook car, and one of my threshing outfit. My rig consists of a 25-horse power Minneapolis engine and 36x60 Rumely Ideal separator. I think that this makes an excellent size of rig for this country.

CHARLES R. FROELICH.
Carrington, N. D.

I am sending you a photograph of my machine, which is a 50-horse power Case engine and a 28x50 separator with all attachments. Threshing was very poor in Maryland last year. I started to thresh July 12 and finished up January 10, but lost a good many days on account of rain and bad roads. I charged six

wood I had only three accidents. One of the fellows reached for a small piece of slab and got too close to the saw and it cut the ends of two of his fingers. Another time one of the fellows dropped a plank two by twelve inches and ten feet long, and in reversing the carriage it caught the plank and pushed it back over the saw, cutting the plank in two and bending the saw so I had to send it to the factory for repairs.

For the six years that I have been out in the field threshing I have had very good luck. The first year I threshed I had an 18-horse power Russell engine. I now have a 17-horse power Jumbo engine and a 32x57 Belleville separator. I have a pea hulling attachment for my machine, so I use the same machine for hulling peas and navy beans that I use for threshing wheat and oats.

One fall when hulling peas with



George A. Kepln, Port Deposit, Maryland, Threshed off and on from July 12 to January 10.

cents for oats, eight cents for wheat and two dollars and a half a ton for baling hay. GEORGE A. KEPLN.
Port Deposit, Md.

About thirteen years ago I bought a sawmill outfit, and not having any experience it was somewhat hard to get along, but I soon learned to run it. I ran this rig for seven years and then sold it and bought me a separator and started threshing, but I did not know much about threshing.

During the seven years I sawed

the Russell engine I had a bad wreck. It was a bad engine to get over the railroad crossing. I always had to lay blocks on the railings in order to get the engine to climb over them, so one day I pulled up on a high railroad dump and laid those blocks, and when the engine got on them, one of them slipped off when the engine was pulling its best. The engine wheel dropped on the railing and one of the pinions on the countershaft broke in two pieces and there I was. The separator pulled the

engine back down the hill. The separator cut to one side and the engine ran back into it, breaking the pole and front axle, one ground wheel and two pulleys of the cylinder shaft. I stayed on the engine and watched it do all this and then I paid thirty eight dollars to get it repaired.

I had one bad piece of muddy road to go through. It was about seventy five yards long. Once we drove into it and when we got in the engine could not pull any more. We cut the separator loose and put planks under the engine and worked it across the muddy place. Then we hitched ten miles to the separator and pulled it across. It took us three hours to get through the mud.

I attended the convention of the Illinois Brotherhood of Threshermen, which was held at Peoria, Illinois. It was very interesting to listen to those good speakers. I think all threshermen of Illinois should come to these conventions and join the Brotherhood, as I did when at the convention, and all put their shoulders to the wheel and make it roll, and also read The American Thresherman and Farm Power where they can read the news of all the threshermen in the U. S.

C. A. EICHORN.

Christopher, Ill.

I, too, come from "God's country," Middlefork, Clinton County, Indiana. I have been in Michigan about twelve years, but think I'll investigate Wisconsin land. I have threshed for twenty-four seasons and am not quite forty years old. My last machine was a J. I. Case, which was a dandy. Seems like hearing from home when you talk about "Old Colfax."

FRANK L. NOLAN.

Henrietta, Mich.

(We'll welcome you to another slice of "God's country" if you'll tackle Wisconsin, Old Timer. Come on in, the water is fine. Uncle Silas.)

I have been in the threshing business since 1895, and I have read your magazine since 1898. When I was a little boy of twelve years I did some threshing with a flail in the old country. At the present time I farm nearly a thousand acres. I do a lot of power farming, using a 30-horse power Port Huron steam engine. At the Minneapolis Tractor Show I bought a Port Huron gas tractor.

JOSEPH NAGEL.

Lebanon, S. D.

I have taken The American Thresherman and Farm Power for several years and I am now sending in my renewal for another five years.

I have been in the threshing business for twenty-six years. I started when I was sixteen years and I do not claim to know it all yet. I am sending you pictures of my rig, which is a 20-horse power Russell engine



—they never disappoint

What was the weakest part in your equipment last year? Was it your belt that was "out of step"? Then, that's where you want to strengthen.

You've heard of Gandy, of course. No belt with such an enthusiastic and nation-wide following could escape your notice. But have you ever tried it?

Gandy Belts appeal especially to those who take a pride in good equipment. Seems as if they were just made to order for them.

They're constructed to meet hard service conditions—

of closely woven cotton duck, folded, welded and seasoned in oils, which accounts for their great resistance to the effects of abuse and uncertain weather. They'll establish a new record for you in performance, economy and length of service.

Gandy Thresher Belts have back of them forty years of honest workmanship—plus the knowing how to make the best belts for a specific purpose.

And Gandy engineers are ever ready to help with your belting problems.

Look for the Green Edge and the Gandy trademark!

The Gandy Belting Company, Main Office and Factory: 729 West Pratt St., Baltimore Md.

BRANCHES: 36 Warren Street, New York City 549 W. Washington Street, Chicago, Illinois



INSYDE TYRES
—genuine inner armor for auto tires. Double mileage; prevent punctures and blowouts. Easily applied without tools. Distributors wanted. Details free.
American Accessories Company Dept. 7-2 Cincinnati, Ohio

Akron Quality Tires
REDUCE TIRE COST 65%

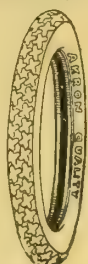
GOODYEAR Tube FREE

5000 Mile Guarantee

Akron Quality Tires are made to meet the increasing demand for reconstructed tires which are indispensable to the maintenance of the auto industry. Their great economy is your personal advantage. To insure properly built and carefully selected goods always order Akron Quality Tires. Shipped direct from factory to you.

One tube given with each tire	
30x3	\$ 7.50
30x3 1/2	8.60
32x3 1/2	9.70
31x4	10.90
32x4	11.20
33x4	11.50
34x4	\$11.85
34x4 1/2	13.55
35x4 1/2	13.90
36x4 1/2	14.50
35x5	15.45
37x5	16.50

Reliner Free With Every Tire
State whether straight side or clincher desired. Send \$2 deposit for each tire ordered, balance C. O. D. subject to examination. If you send full amount with order, deduct 1 per cent discount.
AKRON RUBBER CO.
Robey and Roosevelt
Dept. 433 CHICAGO, ILL.



Light Weight Farm Engines

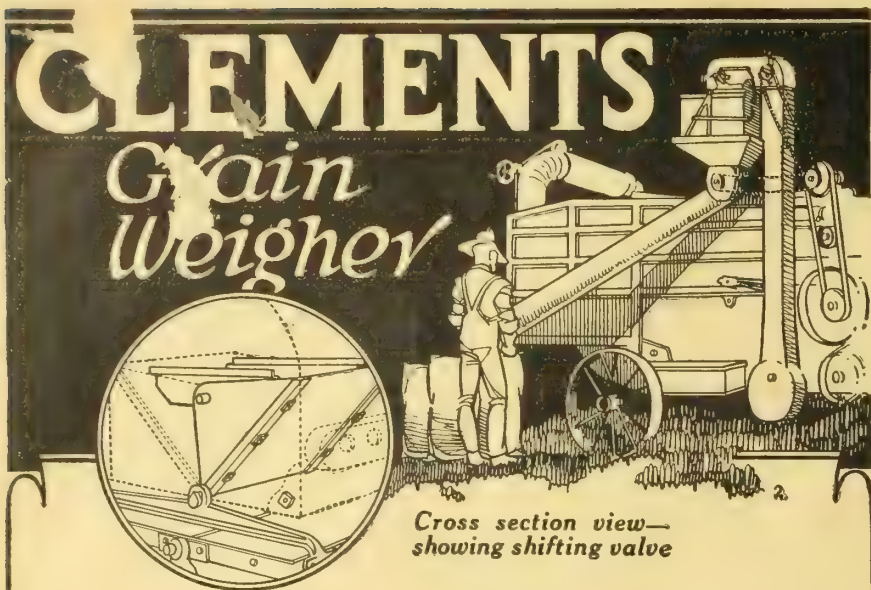
Cushman Engines, recognized everywhere as The Original Light Weight Power, give dependable, economical service on every power job on the farm. Cushman Engines weigh only 40 to 65 pounds per horsepower. The Cushman owner saves valuable time, because he can easily move his engine to the job, instead of hauling the job to the engine.

More Power Per Pound

Cushman Engines weigh only one-third to one-fourth as much as ordinary engines, and they run much more quietly and steadily. Better design, better materials and better workmanship give the Cushman more power per pound. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump without extra charge. Send for Free Book on Light Weight Engines.

CUSHMAN MOTOR WORKS (320)
875 N. 21st Street LINCOLN, NEB.

CUSHMAN



Automatic self-locking

Absolutely all leaking of grain eliminated by the "Clements." After each dump weigher automatically locks itself, until full weight is received in weighing hopper. Double weighing hopper takes grain in a steady stream. Flow of grain from elevator never stops. You are never bothered with a clogged head or elevator, no matter how damp the grain. Farmers all over the country prefer their threshing done with a "Clements" Double Hopper Self-Locking Grain Weigher.

Gives the Thresherman and the Farmer a square deal

With a "Clements" you can not over-run or run short. Not a single grain can run through. Simply set your scale for dumping at the required amount. Your tally will be exactly

the same as that at the elevator. The "Clements" assures satisfaction to you and to the farmer. It weighs automatically, is independent of gears and cannot make a mistake.

Write for Catalog

We will send you, free, our catalog which will fully illustrate and describe this gearless, double hopper, self-locking Grain Weigher. The "Clements" is a time, labor and money saver to all threshermen

Dept. 2.

IDEAL Grain Weigher Company
PEORIA, ILLINOIS

CLEMENTS Grain Weigher

Mention The American Thresherman and Farm Power



CARTON BELT

Heavier Duck—More Rows of Stitches.
Selvaged Edges—Always in Stock.

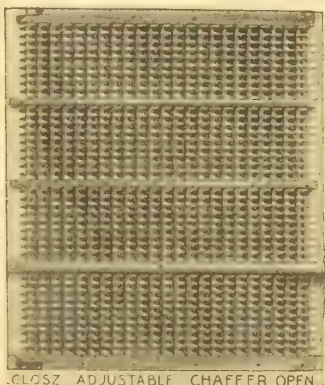
HUDSON MFG. COMPANY
MANUFACTURERS AND WHOLESALERS

Branch: Omaha, Neb. Minneapolis, Minn., U. S. A.

CARTON
Endless Thresher

Mention The American Thresherman and Farm Power

The Chas. Closz Patent Adjustable Sieves and Adjustable Chaffers

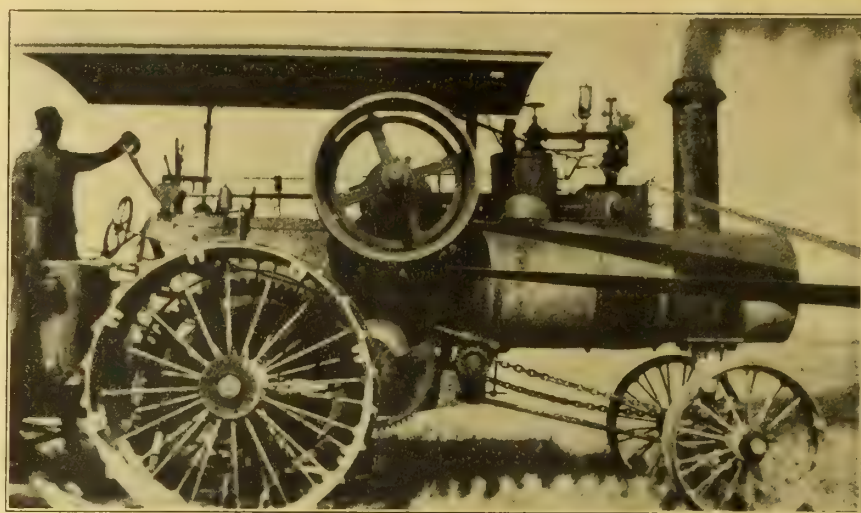


have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa



H. M. Hose, Heartwell, Nebraska, Who Has Been in the Threshing Business for Twenty-Six Years.

and a 36x62 Minneapolis separator. I think this makes a good rig as it gives me but little trouble. I always do my repairing before I go in the field.

We get ten cents for wheat and six cents for oats and barley.

I enjoyed reading about the old gentlemen in the January issue.

H. M. HOSE.

Heartwell, Nebr.

I own and operate a 20-horse power Aultman & Taylor engine and a 33x56 separator, also a Birdsell huller. I have threshed twenty falls and am not rich yet. I notice that the fellows do not brag about what they make any more. What is the reason for this, I wonder.

H. B. McPEEK.

Marion, Ohio.

I have taken The American Thresherman and Farm Power for several years and I like to read the Correspondence Department and see what other threshermen are doing.

I am sending a picture of our 65-horse power Case engine which we use on a 36x58 Case separator. I think this makes a good rig. We also use this engine on a sawmill during the winter.

Threshing is good around here. We get ten cents for wheat, six cents for oats, fifty cents for timothy and one dollar a hundred for sawing.

The man in the picture is my partner and the little girl is my sister. Norborne, Mo. LOUIS HOOK.

I notice that some of your readers have been on the job longer than I have, but I think they'll agree that I know something about it. I ran an old "ground-hog" thresher in '82, and cracked my whip over the horses and watched for the "easy signal" from the man feeding the machine. Also looked after the bolts to keep them tight, and the stakes that held the old "down power."

Last year I had twenty-one hundred bags of rice, four bushels to a bag, and helped my neighbors do the jobs.

I enclose check for five years' subscription, and want to remain a reader always. God bless Uncle Silas and Aunt Malinda.

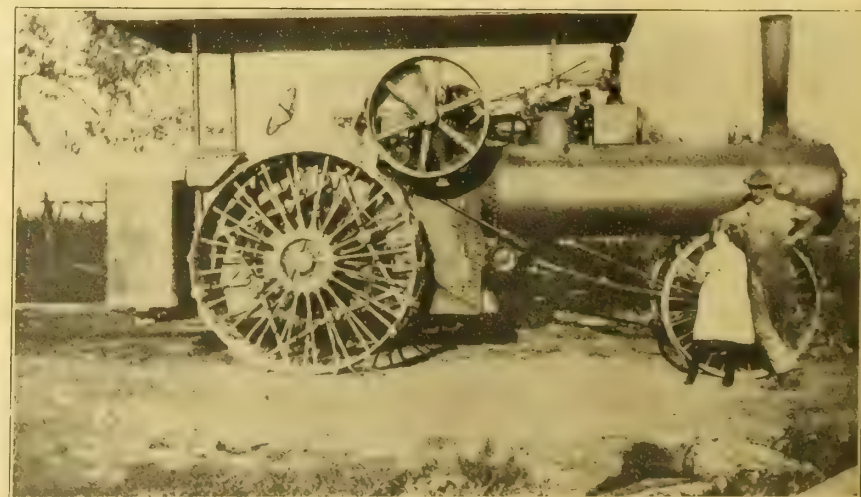
F. C. COUCH.

Hunter, Ark.

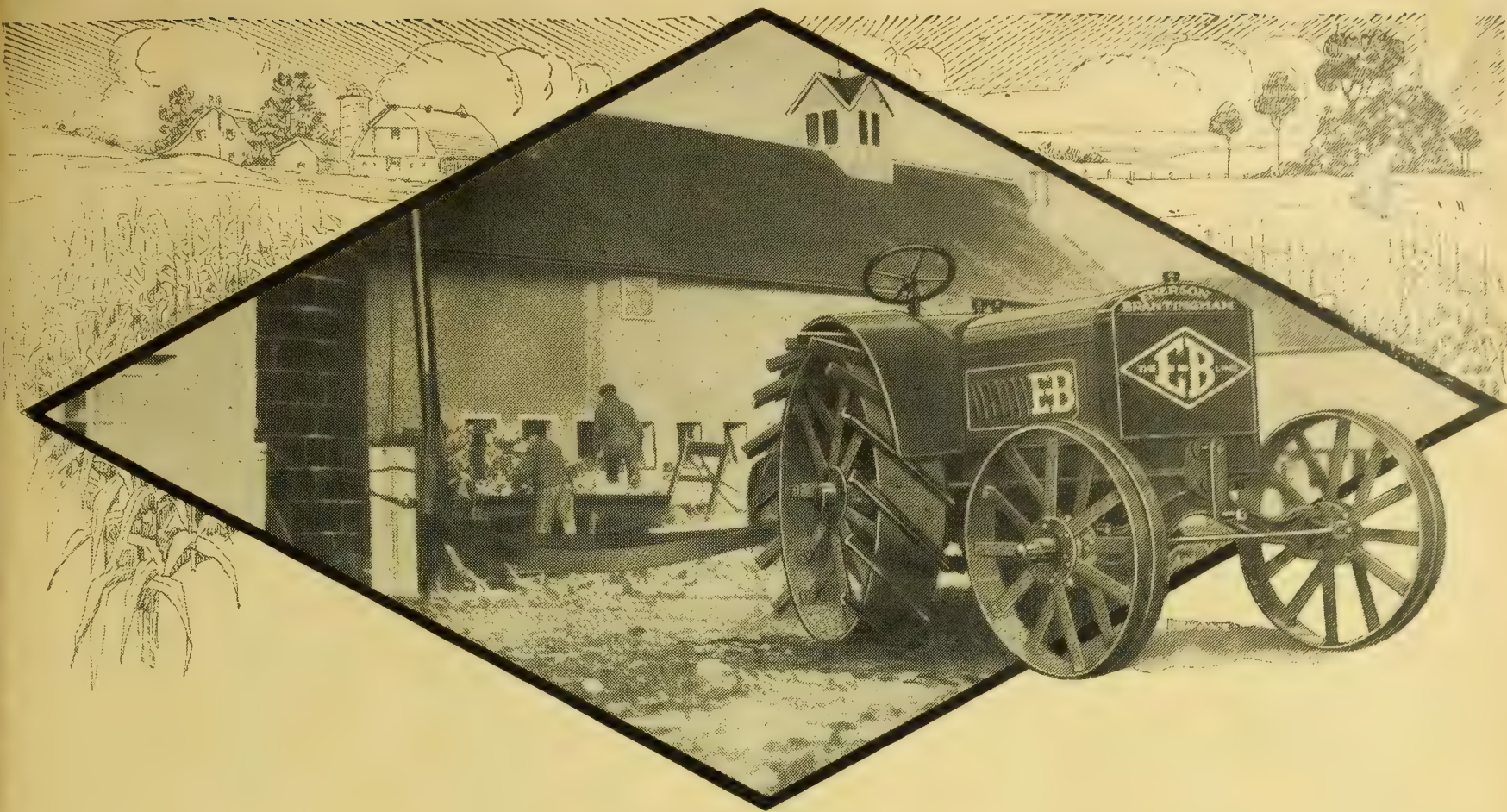
(I used to live two counties below you, Brother Couch, down on White River, at Mount Adams, until I came North with the Yankees in '64, and that rice country there, where land is worth two hundred dollars and three hundred dollars an acre now, could all be bought then for twelve and one-half cents an acre; in fact, it couldn't be given away. Uncle Silas.)

Jessie—"Have you mentioned leap year in the presence of your beau as yet?"

Tessie—"Do I look foolish enough to pull a scare like that on a shy young man and I not knowing where my next steady is coming from?"—*Buffalo Express.*



The 65-Horse Power Case Engine Used by Louis Hook, Norborne, Missouri.



The Important Thing About Corn-Harvesting Machinery

Ask your dealer to show you the long-life features of the E-B Corn Binder and the 12-20 Tractor.

When you go to buy a corn binder you naturally look for features of construction that make its work dependable and economical.

And these machines have been so perfected that you will find such features. E-B binders are conspicuous for them.

But the most important thing to you is, how long will the service stay dependable, economical?

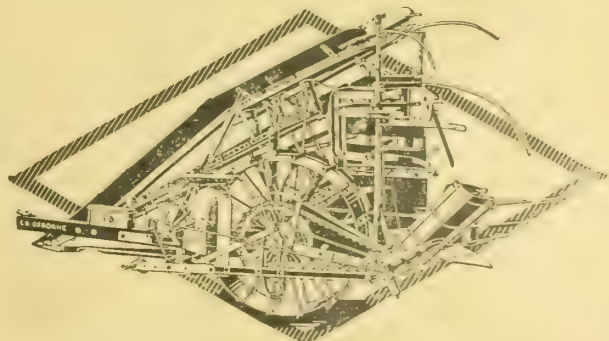
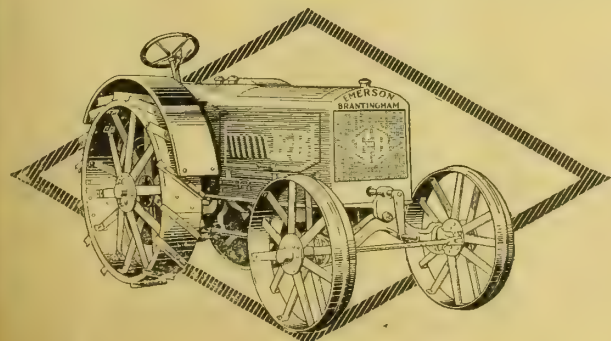
Look closely over the binder in which you think of investing. Make sure that it is built for dependable, economical service many years after you take it off the floor.

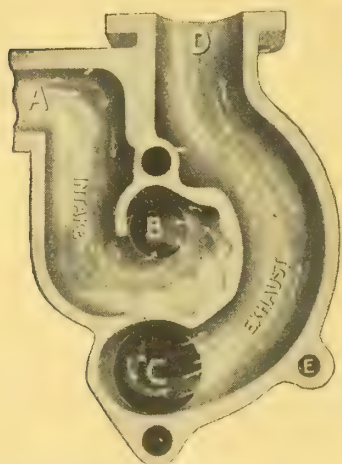
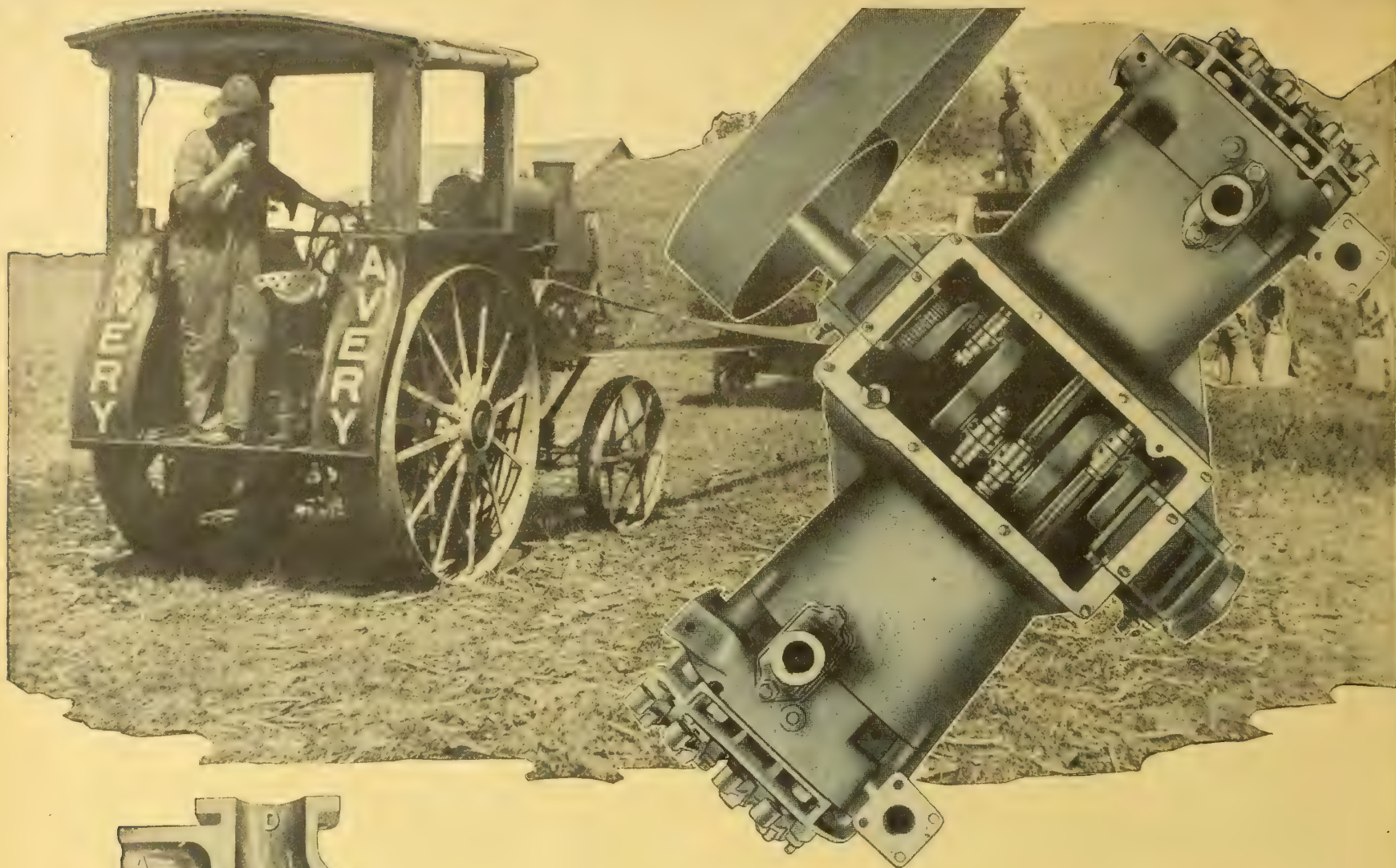
We are sure this is the important test, and E-B binders are built to meet this test.

Many farmers use the E-B 12-20 Tractor to pull the Corn Binder as well as the silo filler. It is adapted to both jobs. It is light and compact enough to take the place of a team with the binder. It is powerful, economical and trouble-free, an ideal power-plant for the silo filler.

Emerson-Brantingham Implement Co., Inc.
Established 1852 Rockford, Ill.

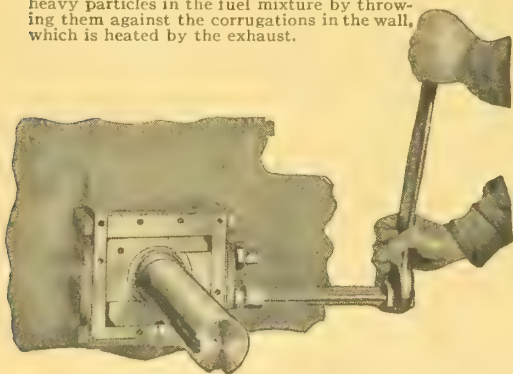
A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company





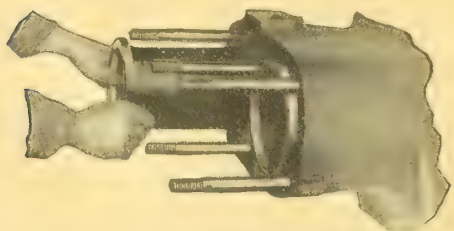
Avery Centrifugal Gasifier—Turns Kerosene or Distillate Into Gas and Burns It All

Placed on each cylinder head. Breaks up the heavy particles in the fuel mixture by throwing them against the corrugations in the wall, which is heated by the exhaust.



Adjustable Crankshaft Box

Only two main crankshaft bearings. Both adjustable from the outside. Makes it possible for you to take up wear in the bearings instantly. Saves time, trouble and expense.



Renewable Inner Cylinder Walls

Cast separately from the main cylinder. Made of harder material and will wear longer. Easily and quickly replaced with new ones yourself and at small cost. After years of service you can put in new cylinder walls, pistons and rings, and your motor is as efficient as when new.

For Real Threshing Power— The “Draft-Horse” Avery Motor

When you have threshing to do, you want your tractor to furnish you smooth, dependable power—power that will keep your thresher going at just the right speed to do a good job.

And that is just exactly what the Avery Tractor with its “Draft-Horse” Motor will do. The reason is it was designed *especially* for tractor work and *exclusively* for Avery Tractors. It is a *thoroughbred*, heavy duty power plant that will make your thresher hum all day long, and you’ll have the satisfaction of knowing it will not fall down on the job. It’s a *real puller in the belt*.

Exclusive Features

The Avery “Draft-Horse” Motor is used in all sizes of Avery Tractors from 8-16 to 40-80 H. P. It has the well-known Avery features, such as

the Avery Centrifugal Gasifiers that turn kerosene into gas and *burn it all*; Renewable Inner Cylinder Walls; Adjustable Main Crankshaft Bearings; Valves in Head; etc.

“Direct-Drive” in the Belt

Avery Tractors deliver *all* the power of the “Draft-Horse” Motor in the belt. The belt wheel is mounted *directly* on the end of the crankshaft. The motor runs at a low speed which allows using a large belt pulley, giving a good grip on the belt. The belt pulley is located just where it should be—on the right side of the tractor where the operator can easily see to line up, and high enough not to require stretching the belt to keep it from dragging. And it’s always in place ready for immediate use.

Write for the Avery Catalog and special information about Avery Tractor Threshing Outfits. Address

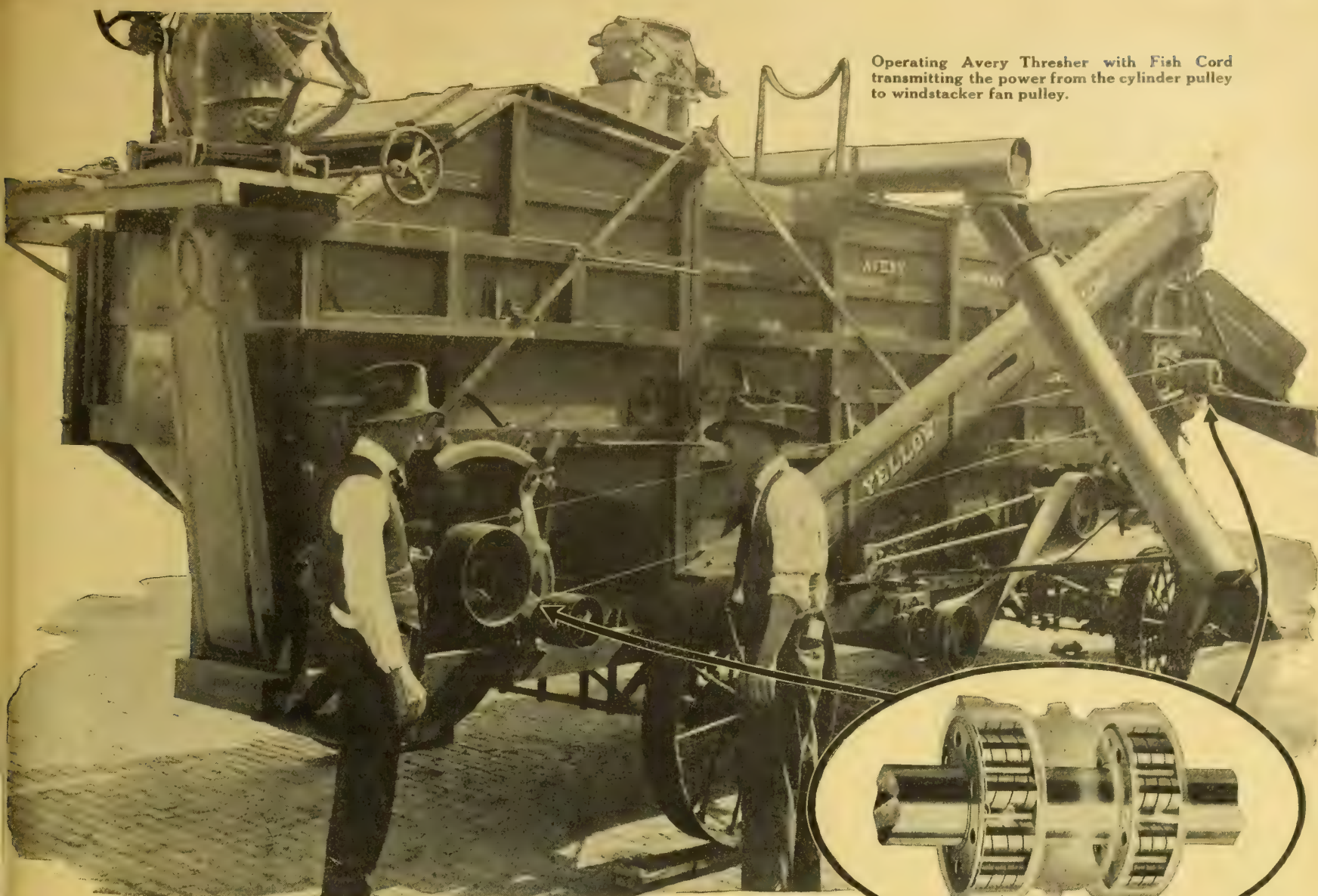
AVERY CO., 334 Iowa Street, Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and San Francisco

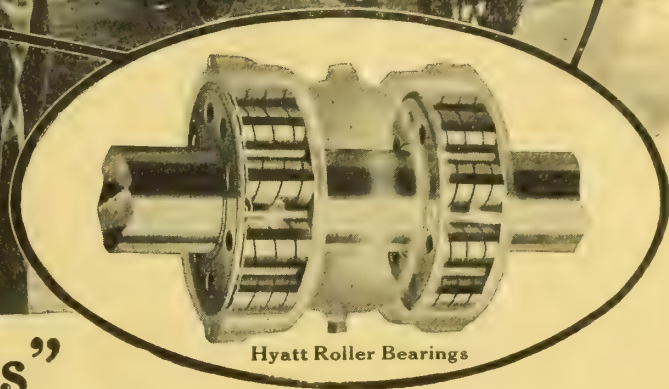
Distributors: Avery Company of Texas; Dallas, Amarillo and Beaumont, Texas
Also Other Principal Machinery Centers

AVERY

**Motor Farming, Threshing
and Road Building Machinery**



Operating Avery Thresher with Fish Cord transmitting the power from the cylinder pulley to windstacker fan pulley.



Hyatt Roller Bearings

Avery Champion "Grain Savers" Are Now Roller-Bearing Equipped

Avery Threshers have long been known because of their wonderful grain saving and grain cleaning ability. Now they are fast becoming even more popular because of their lightness of operation, for the Avery Champion "Grain-Saver" Threshers are now Hyatt Roller Bearing equipped. These Roller Bearings are used on both the cylinder and windstacker fan shafts. Those who have Hyatt equipped Avery Threshers report they are a wonderful success as they make Avery Threshers the lightest running separators built.

Champion "Grain Savers"

Avery Threshers are also the Champion Grain Savers of them all. In twenty-seven actual field tests threshing on canvas, they made the champion grain saving record of saving 99-9-10 per cent—*practically perfect*—a record which even beat the Government grain saving tests and a

record which has never been equaled by any other make of separator. That's why they are backed by the strongest grain saving warranty given with any make of separator.

"Guaranteed-for-Life" Cylinder Teeth

Avery Separators have many exclusive features—they have genuine tool steel cylinder teeth that are guaranteed for life against breakage; the Avery I. X. L. grain saving device fingers which hunt around in the straw for the last kernel and get it. They do good work and last a long time. They are "Money-Makers" and "Job-Takers" for threshermen and "Grain-Savers" and "Grain-Cleaners" for farmers. If you are a thresherman, it will pay you to get an Avery Separator to thresh with; if you are a farmer, it will pay you to have an Avery thresh your grain.

Write for the complete Avery catalog or ask for special circulars describing the Avery line of threshers, including the "Yellow-Baby", "Yellow-Kid" and "Yellow-Fellow" sizes. Address:

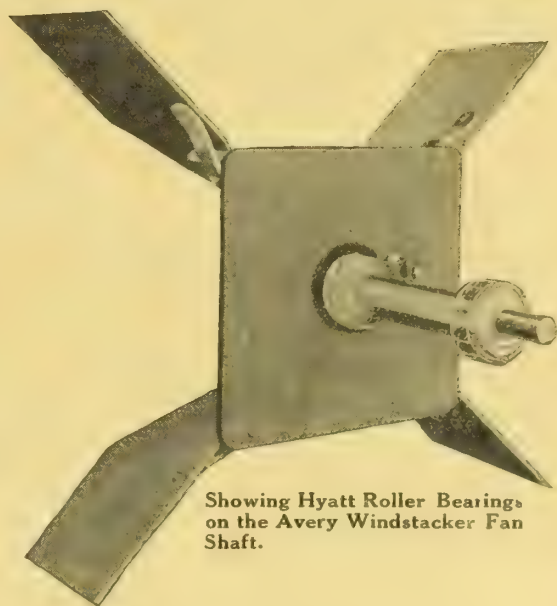
AVERY CO., 334 Iowa Street, Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and San Francisco

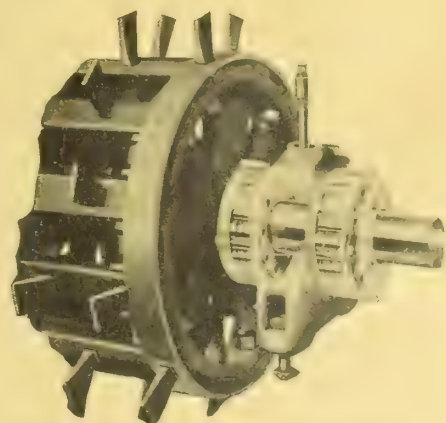
Distributors: AVERY COMPANY OF TEXAS; Dallas, Amarillo and Beaumont, Texas
Also Other Principal Machinery Centers

AVERY

**Motor Farming, Threshing
and Road Building Machinery**



Showing Hyatt Roller Bearings on the Avery Windstacker Fan Shaft.

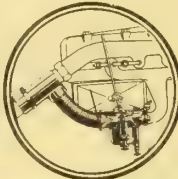
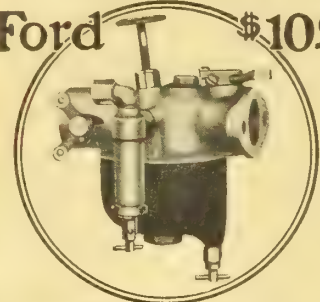


Showing Hyatt Roller Bearings on the Avery Cylinder Shaft.

KINGSTON

CARBURETORS

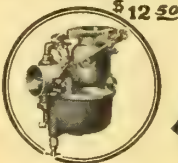
Ford \$10.00



Kingston pep, Kingston economy, Kingston durability have long been known to Ford owners. Here is the best Ford carburetor Kingston has ever devised,—quick on pickup, turns fuel into perfect gas, cleans it and delivers it HOT to motor. Thousands of enthusiastic users. Sent complete with fuel strainer and separator and special air preheating device, ready to install. At all dealers, or send direct to us.

Special Kingston models, all fully guaranteed, for Chevrolet, Maxwell, Buick and Dodge cars. Smoothness and flexibility, quick pickup, sustained power with any Kingston carburetor. At all dealers, or send order direct to us.

Chevrolet



\$12.50

Maxwell



\$12.50

Buick



\$16.50

Dodge



\$15.00

BYRNE, KINGSTON & COMPANY
KOKOMO, Department K. INDIANA.

Women's Department

The Flag

When Freedom from her mountain height
Unfurled her standard to the air,
She tore the azure robe of night,
And set the stars of glory there.
She mingled with its gorgeous dyes
The milky baldrick of the skies,
And striped its pure, celestial white,
With streakings of the morning light.
Flag of the free heart's hope and home!
By angel hands to valor given;
Thy stars have lit the welkin dome;
And all thy hues were born in heaven.
Forever float thy standard sheet!
Where breathes the foe but falls before us,
With Freedom's soil beneath our feet,
And Freedom's banner streaming o'er us?
—Joseph Rodman Drake.

Summer Sentinels

J. S. G.

Though to most of us who belong to the present generation the stern realities of war will always far outweigh its sentiment, still we must acknowledge that there is something that stirs our blood and quickens our imagination even in military terms. My mother probably knew this when she used to dub us "soldiers," in our big family of boys and girls on the farm, and the tasks to which we were set were jobs to which we were "detailed." Many times work was thus accomplished without weariness and friction which would have been done reluctantly but for this appeal to our imaginations.

Now mother was far ahead of her generation in many things, as I have come to realize since I have myself grown up, and among other things she had a far keener sense of the necessity of precaution in the care and preparation of food for the summer table than had most of our neighbors. At a time when flies were looked on as a legitimate annoyance of the summer season, mother had mosquito netting tacked to all the windows, and screened doors that we were taught to keep closed. Each child had his or her especial "detail," and woe to the other children who were unmindful of the importance of anybody else's task! "Summer sentinels" we were called and the truths we learned in this way will never be forgotten.

The little tots were "detailed" to guard against flies and to capture and kill all who stole past the guards. Such sport as there was chasing one lone fly or pacing back and forth in front of the kitchen screened door, with a broom handle over our shoulder! As the study of sanitation and health has advanced, we now know that the flies should have been killed before they were ever hatched but in "mother's day" the schools and the government had not taught us the many preventative habits that are so much better than "cures."

Two of the half-grown children were given the cellar for their summer special task. If the supply of winter vegetables left over into the spring time was unusually heavy and meant too long a task of sorting and removing, there was a "special de-

tail" to assist for a day. Webs were brushed down, cracks and corners swept, and the bright sun and fresh air freely admitted. Whitewash was used and unslacked lime left in an especially damp portions to absorb the moisture. I can still smell the lime in that freshly cleaned cellar and see the white posts that supported the floors above, after they had received their spring whitewashing.

We had no ice-house, on the old farm, and keeping the portion of the cellar used to store milk, butter and other perishable foods as cool as possible was one of the duties of the "cellar detail". It was not kept darkened all the day, for the fresh morning air must be admitted but the shutters must be closed before the afternoon sun streamed in to heat the atmosphere. Mother, as Chief of-Staff not only went on regular "inspection" trips but her eyes were keen to discover drops of milk, webs, spores of molds, etc., whenever her duties took her to the cellar.

I remember, too, how we were taught to see that things should be in the best possible condition before being placed in the cool cellar. If there was fresh meat, it must be unwrapped and put in an earthenware dish and carefully covered by another dish. If the weather was unusually hot, the meat was often "sponged" with a cloth wet in vinegar. I do not remember that we were taught why this process retarded spoiling, but since I have learned that bacteria cannot live in acids, I know why mother sponged the fresh meat with vinegar.

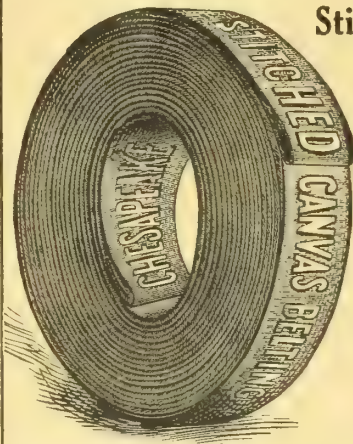
Not only must the food itself be in good condition but its container must be scalded. Especially was this emphasized in the care of milk and butter. No mere "rinsing" in hot water" ever "got by" with mother, when it came to milk pans, pails and strainers! The water must be boiling and there must be plenty of it used to insure a thorough scalding.

When we were wee tots, the chasing and killing of flies was pretty much of a game, but as soon as we were old enough to heed the lessons mother always had some striking illustration to teach us how they would contaminate our food and endanger our health. Had every child been so taught, the following condition, reported by one of our state boards of health, would not be tolerated. Yet how many times could the circumstances be duplicated in most of our country towns!

"In front of a grocery, boxes of blackberries were exposed for sale. They were slightly gray; dust and swarms of flies were present. On the sidewalk, within a few feet of the berries, some poor diseased mortal had spat, and this sputum was circled with flies. A moment's observation showed that they flew back and forth not only between the berries and the sputum, but also between the berries and

The CHESAPEAKE

Stitched Canvas Thresher Belting



"Thirty years of service that has not been surpassed by any other canvas belt."

It is made from the highest grades of raw material which are used after a most rigid inspection. The manufacturing equipment is of the most up to date type and there are thirty years of manufacturing experience behind the goods. All these points produce a belt that will give you the maximum service under all operating conditions. The price is reasonable, even low, for the quality offered. Full stocks are carried and prompt deliveries can be made.

You are offered Quality, Experience and Service at a minimum price. Samples and further particulars will be gladly sent without obligation.

The Chesapeake Belting Company
821 McKim St. Baltimore, Md.

Also Manufacturers of
STAR BRAND BAR BELT DRESSING

Travis Rocker Grates

The secret of successful firing lies in regulating the draft.

The TRAVIS GRATES cut open every bit of air space and the continuous even draft from morning till night will give your engine more pep, increasing production, saving time, labor and coal bills.

We have in stock grates for any size or style of thresher engine fire box ready for shipment.

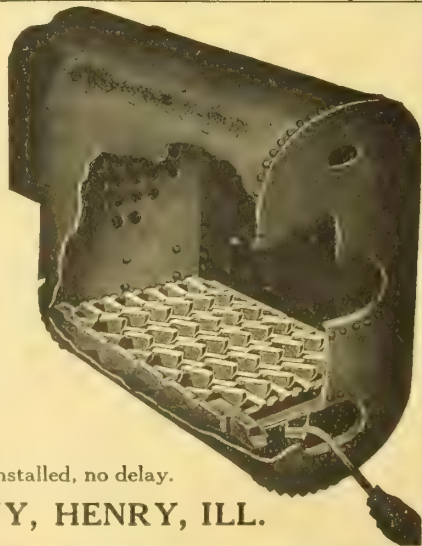
Order by wire, giving length and width of your fire box.

Seventeen years continuously on the market.

If you want the best grates, give us your order.

Quickly installed, no delay.

G. E. TRAVIS COMPANY, HENRY, ILL.



gutter filth and street manure. But, at wonderful, people purchased those berries and ate them raw." "It was found later that much diarrhea existed in the neighborhood, caused possibly by bacteria transmitted by these flies."

One other thing we were taught so thoroughly that I can not bear now see animals (pets) in a kitchen. Even the cleanest animals come in contact with and carry in their coats fur or hair many things that we do not care to have touch our food. Yet how often cats or dogs are kept in the living rooms for fear of soiling the furniture and given free range of the kitchen where food is prepared!

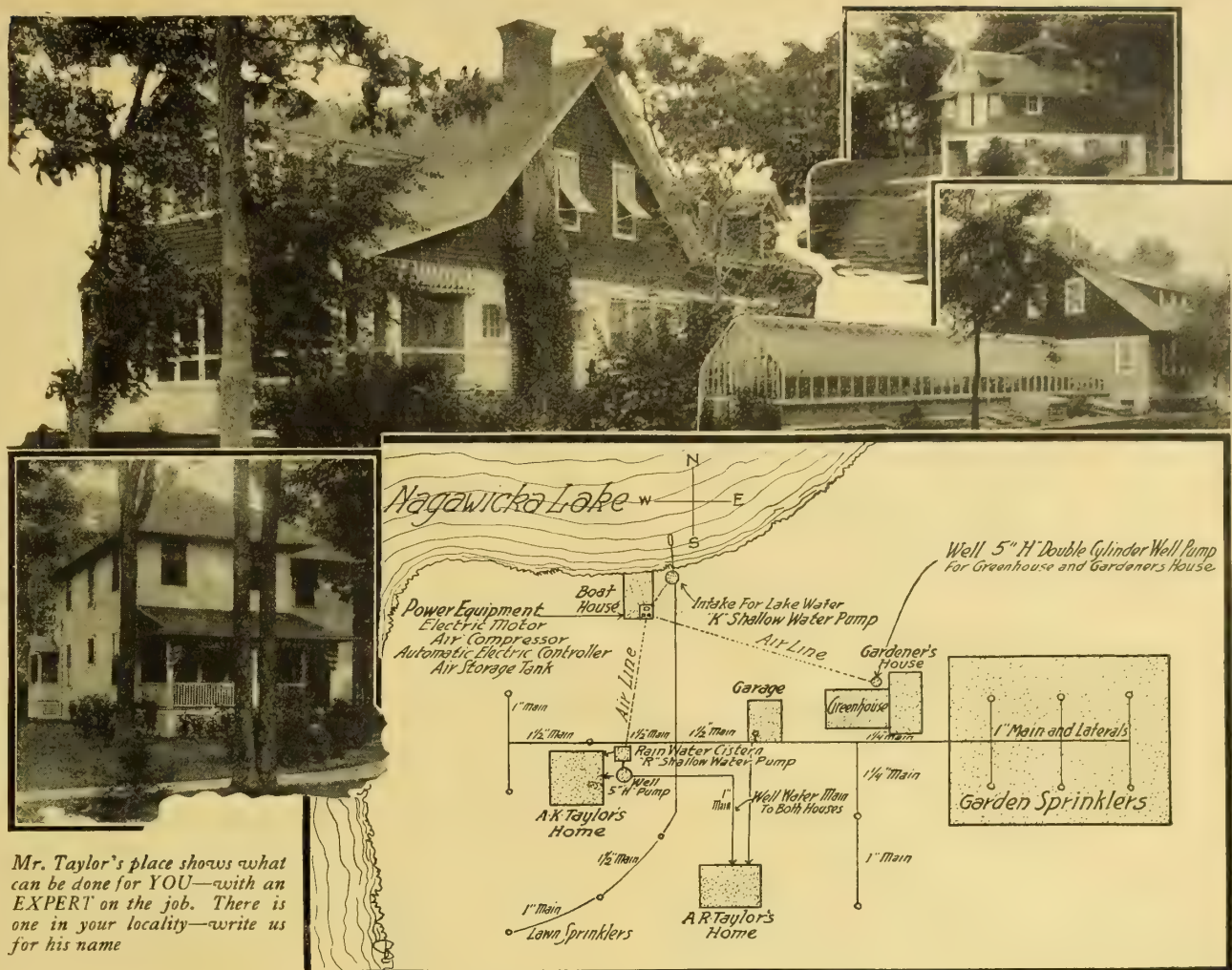
The Company Table

HILDA RICHMOND

Very few housekeepers use the fine linen, silver and china on their tables every day that they do when they have company, and while some people advocate using the best things all the time, there is really much to be said in favor of "company" things. The thin dishes would soon be chipped and if washed by childish hands, the linen becomes stained and everything looks rather forlorn in a short time. It isn't necessary to have expensive things for the company table, on the contrary cheap ones will do nicely; but it is a good plan to have them safe for formal meals and afternoon social affairs.

One housekeeper, with very little money to spend for anything but the necessities, began putting away a few pieces at a time, for her company table. Every woman knows that cheap dishes soon go to pieces with careless handling, but when used with care will last for years. The plates, cups and sauce dishes were plain, clear white, and really they were thin enough to satisfy the most particular woman. They were advertised at a special sale as the kind of china to be used for hand painting, but they do very well for company, not decorated. This gave the foundation for exactly 60 dollars and forty cents, a ridiculously low price when compared with the expensive china of the regular stores. After that, it was easy to get sauce dishes at ten cents each, the plates at the same figure, salts and peppers, fancy dishes for pickles and jellies and the other necessities, though they had to come piece by piece. Her well-stocked store-room was her delight and though now she is prosperous and daily uses better things than for company, she still turns to her treasures and adds to them often. It is her boast that everything costs ten cents or less except a few large vegetable dishes, and her glass and china would satisfy the most particular housekeeper.

For state occasions, it is well to have one long, fine, tablecloth, as heavy as the purse will permit, for a handsome piece of linen lasts for



Mr. Taylor's place shows what can be done for YOU—with an EXPERT on the job. There is one in your locality—write us for his name

Mr. A. K. TAYLOR writes:

"In July, 1912, I had the Milwaukee Air Power Pump Company change the water storage tank at my country place at Nagawicka Lake, Waukesha County, Wisconsin, to an air reservoir, and put a large pump in an intake well near the lake.

"Today five pumps, operating automatically from that single air reservoir—as I use an electric motor—supply lake water to the

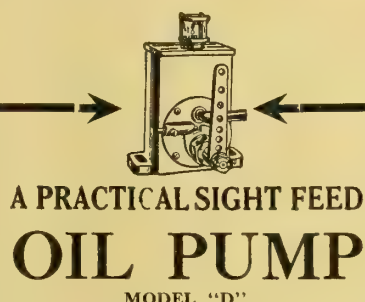
entire grounds and greenhouses and lake, rain water, and spring water 'direct from the well' to my own, my son's, and the gardener's houses.

"The system has met every expectation. In my opinion it is a great improvement over the storage tank system—and one of its strongest features is that it may be added to from time to time."

Signed: A. K. Taylor

Nothing need be added to Mr. Taylor's letter

THE MILWAUKEE AIR POWER PUMP CO., 906 Third Street. Milwaukee, Wisconsin



A PRACTICAL SIGHT FEED OIL PUMP

MODEL "D"

Will cut your oil bill from 30 to 50 per cent

Waste is done away with—every drop of oil is used—and the feed regulation is so minute that a saving of oil is effected from the start.

Put one on your engine and start the season right.

Every Pump Guaranteed

Get it from your supply house or wire at our expense, and we'll ship by Parcel Post, C. O. D.

Catalog A-66
yours for the asking

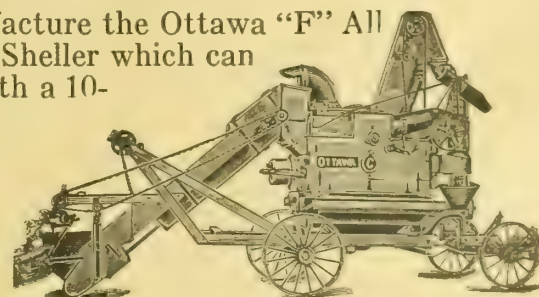
McCullough Manufacturing Co.
Minneapolis Minnesota

Ottawa Cylinder Corn Shellers

The OTTAWA gets all the corn no matter how soft, dirty or rotten

We also manufacture the Ottawa "F" All Steel Cylinder Sheller which can be operated with a 10-horse gas engine.

Write for Catalog



KING & HAMILTON COMPANY OTTAWA, ILLINOIS
Branch Houses: Council Bluffs, Ia., Sioux Falls, S. D.

"NORMA"

PRECISION BALL BEARINGS

(PATENTED)



It is easy to claim precision. It is another matter to maintain it, in quantity production. That "NORMA" precision is a fact is demonstrated by the daily performance of hundreds of thousands of high-grade magnetos and lighting generators in which "NORMA" Bearings are standard. It is this sustained precision which explains "NORMA" silence and serviceability at high speeds.

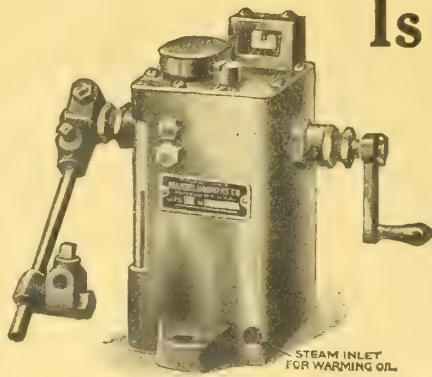
See that your Electrical Apparatus is "NORMA" Equipped.

THE NORMA COMPANY OF AMERICA

Anable Ave., Long Island City, New York
Ball, Roller, Thrust and Combination Bearings

Mention The American Thresherman and Farm Power

An Oil Pump That Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H.P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.

311-313 Babcock Street

Buffalo, N. Y.

years. One careful housewife was shocked when her daughter gave her a piece of expensive table linen for a birthday present, and really could not enjoy it because she said it was a piece of "sinful extravagance." That was twenty-one years ago and that tablecloth is still her best one and used whenever a four-yard cloth is needed. Cheaper linens have come and gone and still that beautiful cloth, strewn with water lilies, is the household standby. In another home there is a tablecloth more than fifty years old, but that is seldom used as the owner wants to see how long it will last for family occasions.

If one can afford solid silver, it can be used every day without even hurting it, but in the plated it is nice to have a bright, new set, even if it is only a cheap one, for company. There is something about well polished silver that sets off a table wonderfully and, with care, a good plated set will hold out many years. Butter knives, gravy ladles, teaspoons and cold meat forks, plated, are within the reach of all. I have used a cold meat fork for company for ten years and it still looks bright and new.

So for a very little money, the housewife may have extra dishes for guests and still not impoverish herself. Dishes without cracks and nicks, silver bright and shining, glassware unclouded with dirt and poor soap, and china dainty and pretty, set on a clean cloth, are attractive to all.

Tried and Found True

(The Editor of the Woman's Department has tried all the recipes printed below, in her own kitchen, and found them "true.")

ICED COFFEE.

Iced tea was an old friend of ours, for a hot-weather drink, but iced coffee we have only learned to know this summer. Make good strong coffee and, if your ice is the kind you can use in drinks, pour the hot coffee over chipped ice, season with sugar and cream and serve. Both coffee and tea have a better flavor if chilled quickly, hence the direction to pour the hot beverage over the ice, instead of allowing it to cool first.

PUNCH WITH TEA.

To mild tea, add the juice of lemons and oranges. The proportion of three lemons and three oranges to a quart of tea is about right. Sweeten to the taste and serve very cold. We often add other fruit juices, in season.

CREAMED HAM.

The English are very fond of creamed ham, which they prepare from cold, boiled ham in the following manner: Cut the ham into small pieces, fry to a light brown in a greased frying pan; add flour and stir until brown, then gradually add

milk enough to make of a desirable thickness. Serve very hot on toast or use as a meat dish with potatoes.

PUDDING SAUCE.

When you want a pudding sauce that is "different," try the following. Make a "hard sauce" by creaming together butter and pulverized sugar until perfectly smooth. Then work in, gradually, the strained juice of almost any ripe fruit or the juice and mashed pulp, instead of the juice alone.

TUNNY FISH.

Every little while, we just have to ask "Have you discovered tunny?" If not, ask your grocer to get you some. It comes in all the sized cans that salmon does, and is much more delicate in flavor. Often people, who do not care much for the stronger flavored fish, find tunny very palatable. Prepare it in any of the following ways:

CREAMED TUNNY.

Make a smooth, white sauce by blending two tablespoons of melted butter and two tablespoons of flour. Add, gradually, enough milk to make a nice gravy. Then add a can of tunny fish. Serve either on toast or as the meat-dish for the meal.

TUNNY SALAD.

Prepare the tunny by picking into small shreds. Add celery, hard-boiled eggs and plenty of good salad dressing. Season with salt and pepper to taste and serve very cold on lettuce leaves.

PEANUT-BUTTER PIE.

One cup sweet milk; one-half cup sugar; one cup peanut-butter; one teaspoon butter; two eggs. Cream together sugar and eggs until smooth. Add peanut butter and mix thoroughly; add milk and stir until well mixed. Pour into a pie crust and bake until a light brown. Top with meringue, if desired.

George E. Long Retires

On April 19, following his re-election as a member of the Board of Directors at the annual meeting of the Stockholders of the Joseph Dixon Crucible Company, George E. Long, senior vice-president, announced his decision to retire. Thereby he terminates forty-three years of active and valuable service with this company, beginning in the capacity of a stenographer and advancing to the offices of secretary, treasurer and vice-president, respectively.

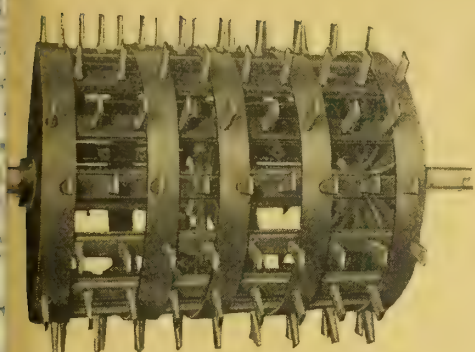
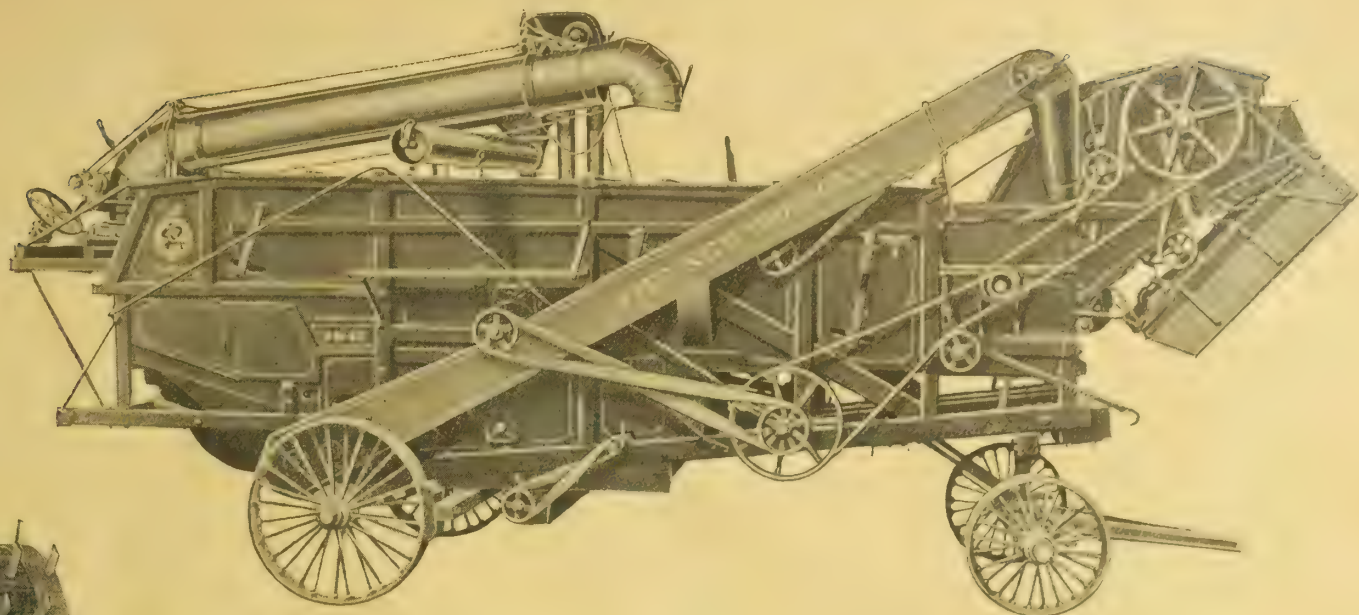
Redd—"Is it a fact that it costs you more to keep your automobile than it cost to buy it?"

Greene—"Oh, yes."

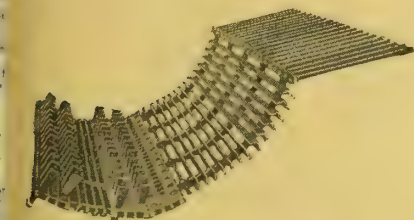
"Well, I don't want anything that costs more to keep than it does to get."

"Why, you've got a wife, haven't you?"—*Yonkers Statesman.*

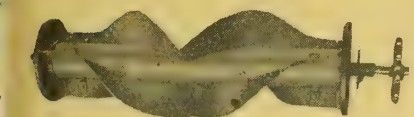
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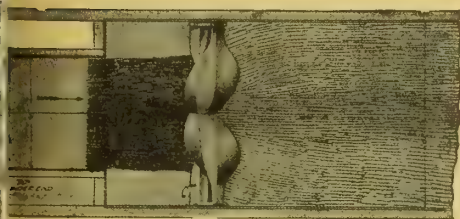
Easy-running 15-Bar Cylinder



Patented High Finger Grate



Patented Distributing Beater



How the Distributor Spreads the Straw

Get the Latest Improvements

78 years of constant improvement have kept Russell Threshers the **best in the world**. With their recent improved features, Russell Threshers **work faster**—and save both time and labor; they get **all the grain**—and turn what would otherwise be lost, into **clear profits**.

These exclusive features include the big easy-running 15-Bar Cylinder that works tooth-and-nail with the patented High Finger Grate and separates most of the grain right there; and the patented steel spiral Distributing Beater that plunges into the straw, spreads it evenly full width across the rack, and helps get out the very last kernels.

Six Sizes—One Pattern

Built in six capacities from the 20x34 to the big 36x60, all just alike in design and exclusive features; the smaller sizes built just as strong in proportion to their capacity as the larger sizes.

Adaptable to Grains, Rice, Seeds and Beans.

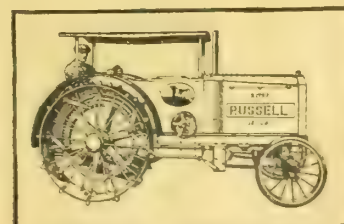
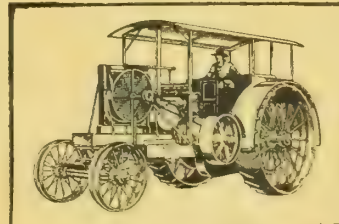
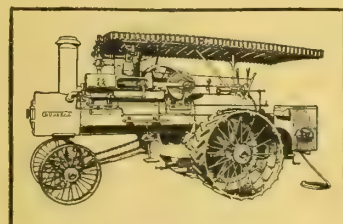
Steam and Gas Tractors

For exclusive thresher work the old reliable Russell Steam Tractor never yet had a real rival.

For general work the four Russell Gas and Oil Tractors are just as superior in their class—**built up** to the "Russell" standard, **not down** to meet a price.

THE RUSSELL & CO.

Massillon, Ohio



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RUSSELL

THE OLD RELIABLE LINE

6 Reasons Why This Thresher Is So Popular:

1. Low operating cost.
2. Ability to handle unusual and difficult grain under all conditions.
3. Durability—stronger and more permanent materials—all steel construction, least repair expense.
4. More modern improvements that save all the grain.
5. Lightness—less power.
6. Simplicity—fewer parts.



"Beats Anything I Ever Used"

Dear Sirs: I have been in the threshing business ten years, having had dealing and hard work with several kinds of feeders, but the Wood Bros. Thresher beats anything I have ever used for hard and fast work. My feeder is not worn a bit that I can see; I think it will last as long as any two feeders I ever owned.

With success to Wood Bros., I am, yours,
J. B. JOHNSTON,
Haddocks, Idaho.

"Best Machine In My Experience of 38 Years"

Wood Bros. Thresher Co.,
Des Moines, Iowa.

Gentlemen: The new rig I bought of you last year is the best outfit I ever run in my experience of 38 years of threshing. The separator saves and cleans the grain the best of any separator I ever used. It is the lightest running separator I ever used. I would recommend the Wood Bros. machinery to any thresherman.

Yours very truly,
ALBERT W. MARKO,
Carlinville, Ill.

Ask Any Owner of a Wood Bros. Thresher

When you want to know the real reasons for buying a Wood thresher—go to any one or all of the thousands who operate them—and you will get practical, first-hand facts.

Read the two letters reproduced herewith—and think about the Wood thresher from the standpoint of the user's experience—then get more facts from us.

You will find that every feature of practical thresher advantage points conclusively to the Wood.

WOOD BROS. THRESHER COMPANY
Makers of Separators and Threshing Engines
DES MOINES, IOWA

Branch Houses at Minneapolis, Minn., Lincoln, Nebr., and Decatur, Illinois

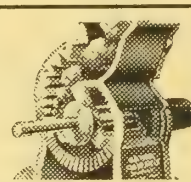
AT-J

DAISY FLY KILLER



HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.

PLACED ANYWHERE ATTRACTS AND KILLS ALL FLIES. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 5 by EXPRESS, prepaid, \$1.25.



Limestone Pulverizers

Sold direct from Factory to Farmer
Write for catalog
O. B. Wise Pulverizer Co.
Knoxville, Tenn.

MYERS SELF-OILING PUMPS

For Home, Farm or Factory

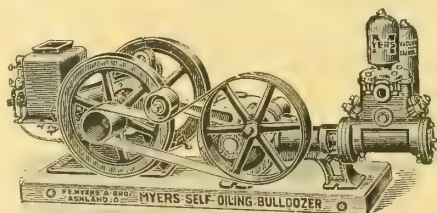
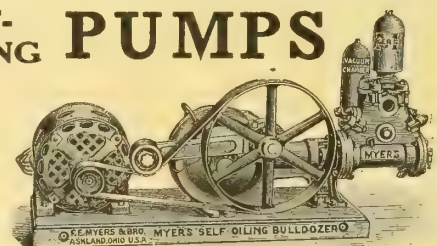
Modern in every detail and designed for economical and efficient pumping service—

Are self-oiling, have covered working parts, extra large valves and improved method of power application—

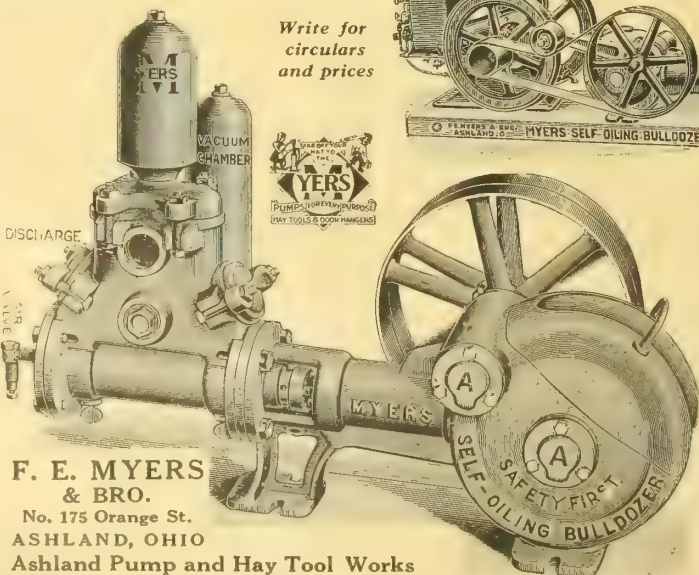
Will elevate water, force it against pressure, or pump it any reasonable distance—

Just as practical for pumping gasoline, kerosene, lubricating or other oils—

Operation by any power. Different styles and sizes meet depth and capacity requirements.



Write for circulars and prices



F. E. MYERS & BRO.

No. 175 Orange St.
ASHLAND, OHIO

Ashland Pump and Hay Tool Works

For safety, economy, long time, uniform service, Myers Self-Oiling Pumps are unequalled. Different styles and sizes meet all needs. Operation, any power.

Mention The American Thresherman and Farm Power

Asked and Answered

Question of E. B. Will dynamite kill cattle if they eat it?

Answer.—Yes; dynamite will poison cattle and likely kill them. They like the salty taste of the explosive and will eat it. Keep it out of their reach.

Question of E. E. R. I am running an old steam engine on which the main shaft

is worn down in the bearings so I cannot set the valves correctly. Should the center of the main shaft line up with the center of the cylinder and cross-head guide?

Answer.—When a traction engine is in line, the following conditions must be fulfilled: First, the center line of the cylinder, center line of the guide and the center of the main shaft must lie in the same straight line. The center line of the main shaft must be exactly at right angles with the center line of the cylinder and in the same plane. The crank pin cross-head pin and counter shaft must be exactly parallel with the main shaft and this must be parallel with the drive wheel axle.

Question of E. H. What causes dynamite headaches?

Answer.—Headaches come from handling dynamite barehanded and breathing the fumes and smoke that follow the blast. To avoid headaches, wear gloves and keep out of the smoke.

Question of W. H. D. My gas tractor pounds on heavy loads. I run it with

the spark retarded as much as possible and the piston rod tight, the valve tappets are taken up to a thirty-second of an inch, but when pulling up grade the motor pounds. On the level the engine will pull fine without pounding when pulling a twelve-inch bottom plow six inches deep. I keep plenty of oil in the crank case and everything tight and well oiled. What do you think is the matter?

Answer.—My first thought is that there probably is considerable carbon in the cylinders of your tractor motor. Probably there is not enough so as to cause your motor to act up under the comparatively light load which you are pulling on level ground. When you start the tractor up a hill this load is, of course, very much greater, and as the heavy load comes on, the tendency would be for the engine to pound as the heat inside of the cylinders is increased through the overload. I am inclined to believe that by having the cylinders cleaned on the inside, you will get rid of your trouble.

If you are a fairly good mechanic, you can scrape the carbon out your-

self. It is not so very difficult and believe your instruction book give you detailed directions for doing it. In removing the cylinder head from an engine, you should use special care not to injure the gasket because it is important that a tight fit be obtained when you replace the cylinder head.

Question of E. E. Can batteries be used to fire electric caps?

Answer.—Yes; but their use is recommended against because they are treacherous and more or less dangerous. Better use a blasting machine made for this purpose.

Question of C. F. S. One cold day last fall my traction engine did not run right.

I was running on one cylinder. One in a while it would shoot on the other. I ran the tractor this way for several hours. When I stopped, I took out both cylinder heads and cleaned the carbon out on the right cylinder which was the one that had not been firing. I found some cylinder oil in the back of this cylinder. What caused the oil to get there? When I started up the tractor again it ran better, but the exhaust kept shooting out white smoke all day, with fire at the exhaust. The next day was my last for the season. The spark plugs were in good condition and a good spark was delivered. My tractor is equipped with a force-feed lubricator.

Answer.—The light colored smoke you noticed coming from your exhaust pipe was caused by an excess of lubricating oil in the cylinders. If the smoke had been black it would have indicated that it was caused by a fuel mixture which was too rich. If the smoke had been a dirty grey color, it would have indicated both an excess of fuel and of lubricating oil.

Possibly something is wrong with the piston, piston rings or cylinder wall in the cylinder that was giving the trouble. There is a possibility that the rings on that piston are badly gummed up and allow oil to pass by them, or there might even be a broken ring. We should advise that you take the piston out of this cylinder and see what the trouble is. Perhaps a good cleaning is all that is needed, or perhaps new piston rings should be fitted. I believe that in your tractor, aside from the oil in the crank case, your motor is lubricated by a force-feed. It might be, of course, that some trouble has developed in the feeding of lubricating oil but the fact that lubricating oil collected in the cylinder which was not firing would not necessarily prove this. The cylinder which was

Farmers Now Demand The Grain-Saving Stacker

LIST OF MANUFACTURERS

United States

Aultman & Taylor Machinery Co., Mansfield, Ohio	Harrison Machine Works, Belleville, Ill.
Avery Company, Peoria, Ill.	Huber Manufacturing Co., Marion, Ohio
A. D. Baker Company, Swanton, Ohio	Illinois Thresher Co., Sycamore, Ill.
Banting Manufacturing Co., Toledo, Ohio	Keck-Gonnerman Co., Mt. Vernon, Ind.
Batavia Machine Co., Batavia, N. Y.	Leader Tractor Manufacturing Co., Des Moines, Iowa
Cape Mfg. Co., Cape Girardeau, Mo.	Link Mfg. Co., Kansas City, Mo.
J. I. Case Threshing Machine Co., Racine, Wis.	Minneapolis Threshing Machine Co., Hopkins, Minn.
Clark Machine Co., St. Johnsville, N. Y.	Port Huron Engine & Thresher Co., Port Huron, Mich.
Ellis Keystone Agricultural Works, Pottstown, Pa.	The Russell & Co., Massillon, O.
Emerson-Brantingham Co., Rockford, Ill.	Russell Wind Stacker Co., Indianapolis, Ind.
Farmers Independent Thresher Co., Springfield, Ill.	Sawyer-Massey Co., Ltd. (U. S. Agency), Moline, Ill.
A. B. Farquhar Co., York, Pa.	Southwest Mfg. Co., Oklahoma City, Okla.
Ferdinand Machine Works, Ferdinand, Ind.	Swayne, Robinson & Company, Richmond, Ind.
Frick Company, Waynesboro, Pa.	The Westinghouse Company, Schenectady, N. Y.

Canada

Robt. Bell Engine & Thresher Co., Ltd., Seaforth, Ont.	MacDonald Thresher Co., Ltd., Stratford, Ont.
Dominion Thresher Co., Ltd., New Hamburg, Ont.	Sawyer-Massey Co., Ltd., Hamilton, Ont.
J. B. Dore & Fils., Ltd., Laprairie, Que.	Stewart Sheaf Loader Co., Ltd., Winnipeg, Man.
Ernst Bros. Co., Ltd., Mt. Forest, Ont.	Wallace Machine Works, Ltd., Sussex, N. B.
John Goodison Thresher Co., Ltd., Sarnia, Ont.	Waterloo Manufacturing Co., Ltd., Waterloo, Ont.
Hergott Bros., Ltd., Mildmay, Ont.	R. Watt Machine Works, Ltd., Ridgetown, Ont.
	George White & Sons Co., Ltd., London, Ont.

THRESHERMEN know the importance of satisfying customers. They are, therefore, demanding from the manufacturer that the separators they use must have this necessary equipment.

Manufacturers of the famous makes equip with the Grain-Saving Stacker and will furnish it with the separator you choose, on your demand.

Such universal endorsement proves that the Grain-Saving Stacker is the most important improvement in threshing machinery which has been developed in the last twenty-five years.

No thresherman who uses the Grain-Saving Stacker need worry when the farmer examines his straw stack for wasted grain. For the Grain-Saver puts the grain in the sack where it belongs—and not in the straw stack.

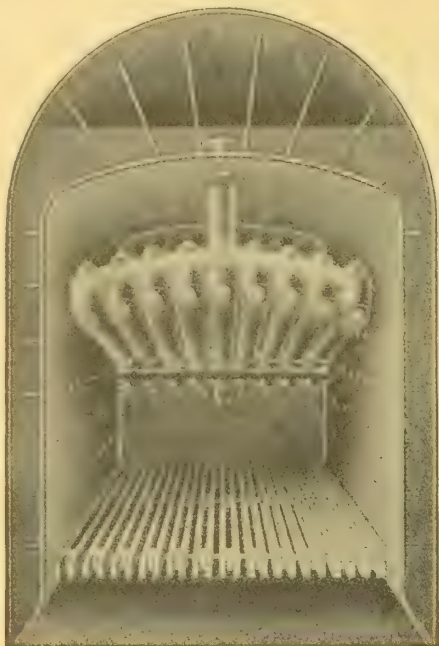
Farmers have found that the Grain-Saving Stacker saves enough grain to pay the threshing bill. For this reason they are demanding that the rig that does their job must be equipped with the Grain-Saving Stacker.

Write to any of the list on this page for full information about the Grain-Saving Stacker.



See that this trade-mark—in colors—is on each side of the stacker attached to the threshing machine you choose. It indicates the Grain-Saving Wind Stacker

The Grain-Saving Stacker Originated With the Indiana Manufacturing Company, Indianapolis, Ind., Who Also Originated the Wind Stacker



Save Fuel and get More Steam

Take a good look at this illustration—and you will clearly understand what a GUGISBERG TUBULAR ARCH can do for any steam

engine. It extends the heating surface of your boiler to within easier reach of the fire and at the same time causes a long flame which gives increased heat with a minimum of fuel.

The ordinary open fire box means a short flameway and a steady waste of fuel that runs into considerable money at present prices.

What Users Say:

Gentlemen:
I am highly pleased with the Gugisberg Tubular Arch, which I had installed in my 40-H. P. Reeves. It easily saves forty per cent of the coal, plowing and threshing.

E. C. Haynes,
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I like the Arch fine.
C. W. Bauer,
Upland, Nebr.

Your Arch has given entire satisfaction and is a coal saver.
John White,
Colby, Kans.

It is perfect.
Ed. Yates,
Madelia, Minn.

The Tubular Arch is the best thing I ever put on my rig.
George Schulte,
Mankato, Minn.

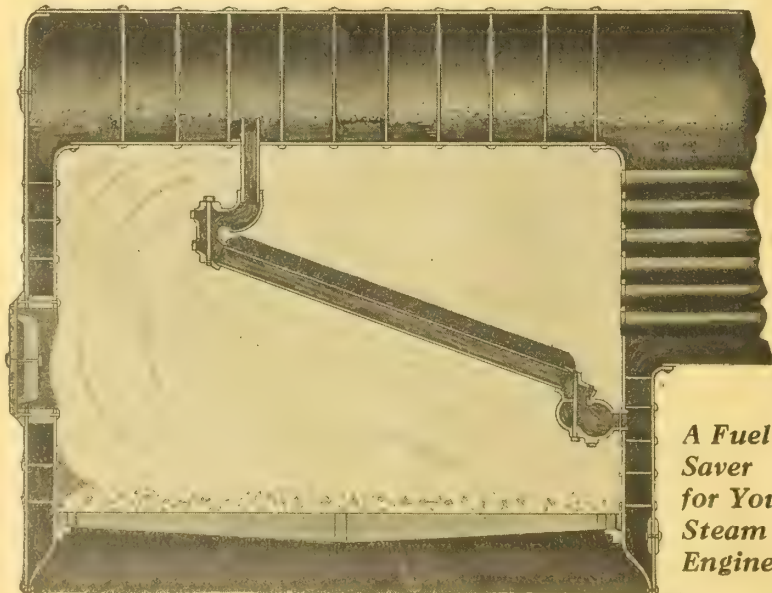
THE GUGISBERG TUBULAR ARCH corrects this condition. It establishes a long road over which the flame must travel, thus producing the greatest heat possible from every particle of fuel. The long flame also fills the fire box to all sides, preventing cold air pockets.

Now look at the lower illustration—a side view of the GUGISBERG TUBULAR ARCH—and note how a small quantity of fuel can be made to produce a big flame, which means more steam in less time than the ordinary boiler takes to produce a comparatively small head of steam.

With a TUBULAR ARCH installed in your boiler you can fire with any kind of fuel—straw, wood or coal, and save from 25% to 40% on your fuel bill. Present users absolutely disclaim any formation of scale.

Write us for more information, stating kind of engine, number of horse power and length and width of fire box inside.

The Gugisberg Tubular Arch Co.
St. Peter, Minnesota



A Fuel Saver for Your Steam Engine

running without explosion was not burning up the lubricating oil as would have been the case if it had been operating properly. It was receiving the same amount of lubricating oil as if it had been running properly, and, therefore, this lubricating oil would naturally collect in the cylinder.

If, when you were running your tractor, fire was noticeable at the exhaust, it would seem to indicate that your mixture of fuel was not proportioned as it should be, because it shows that you have a slow burning mixture in the cylinder. Either a very weak mixture or a very rich mixture may be slow burning. Probably a careful examination will show you what was out of adjustment to cause this.

Question of W. C. S. If a crowbar strikes a load of dynamite will the dynamite go off?

Answer.—Not necessarily. But the practice of using a metal bar to tamp dynamite is dangerous. The bar may strike fire from a stone, setting the dynamite on fire and the heat will promptly set off the cap which in turn sets off the remaining dynamite. Always use a wooden tamping stick.

Question of W. M. M. In preparing a boiler for standing idle for several months, would you advise one to leave the handhole plates out or in? Is it a good plan to grease the boiler on the inside when idle, and if so, how is this done?

Answer.—We consider it better practice to leave the hand-hole plates in a boiler when it is being laid up for some time. In preparing a boiler for such a lay-up, you might put some kerosene into the full boiler. This kerosene will float on top of the water and as the water is drained from the boiler, the kerosene will cover the entire metal surface of the inside of the boiler with a thin film. After the water has all been drained from the boiler you should build a light fire with the boiler openings left open. Only a very light fire should be built, just enough to warm the metal of the boiler so as to dry it thoroughly. After the boiler is well dried out, replace the hand plates so that damp air cannot come in from the outside.

Question of M. S. How is the best way to thaw dynamite?

Answer.—Small quantities of frozen or chilled dynamite can be satisfactorily thawed by allowing it to remain twelve to fourteen hours in a "green" manure pile. Larger quantities should be thawed in a thawing kettle which can be obtained from explosive supplies manufacturers.



It's Pulley Contact Which Counts

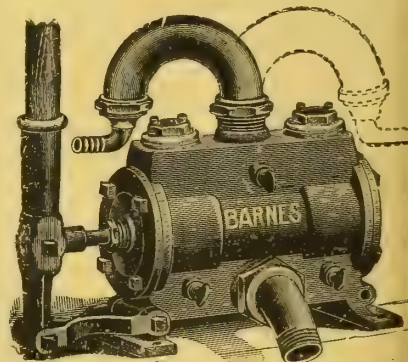
The more wrap you can get of the belt on the pulleys the more your belt will pull.

Tight belts touch only half the pulley—180°. Slack belts, with Cling-Surface treatment, wrap sometimes 300° or 5-6 of the pulley.

They can do this because Cling-Surface has stopped all slipping. You use tension to stop it. Use Cling-Surface and you won't need tension and can run slack belts.

Buy Cling-Surface in 1, 5 or 10 lb. tins from your dealer or from us, or ask us.

Cling-Surface Company
1070 Niagara St. Buffalo, N. Y.

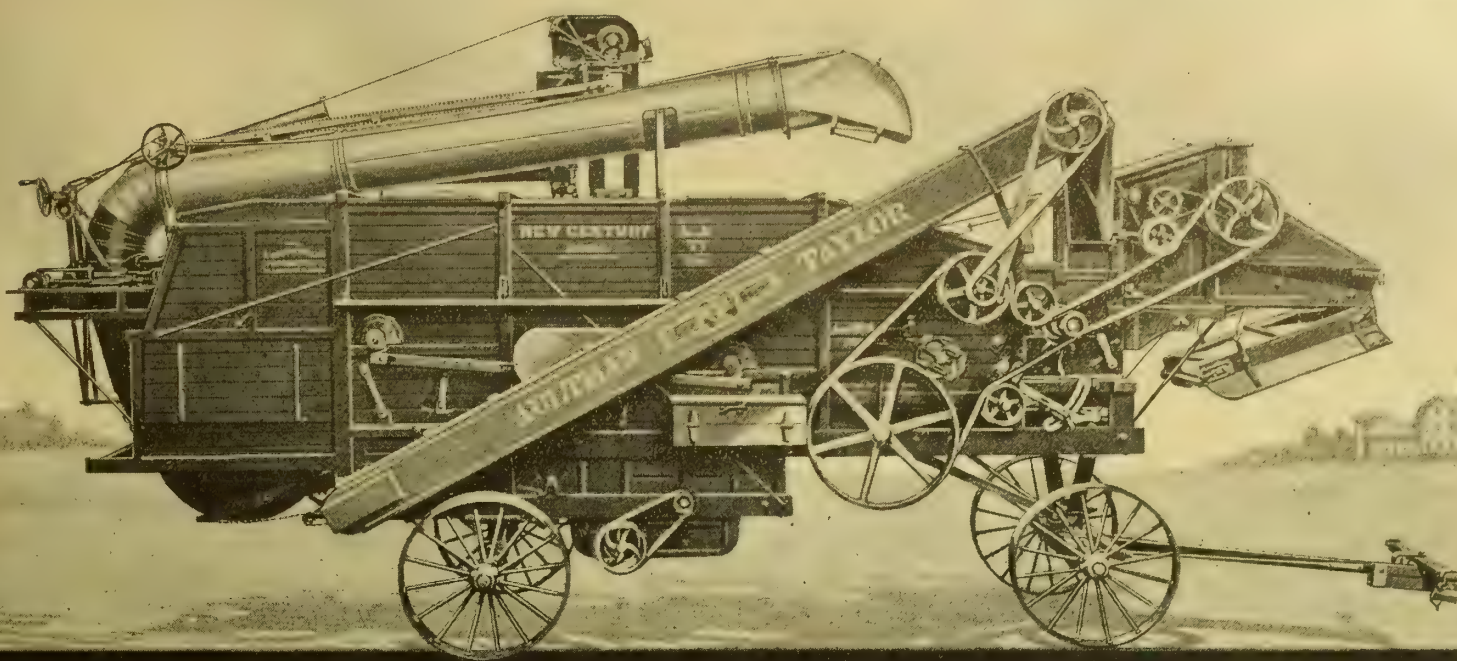


Barnes Favorite Double-acting Thresher Tank Pump

Record Breaker for 1919
Fitted for both hose and iron pipe. Has brass valve seats and cylinder polished as smooth as a gun barrel. Capacity 2 1/2 barrels per minute. In use the world over. Guaranteed the best tank pump made. Write for circular and prices.
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800 North Main Street Mansfield, Ohio



STREISSGUTH-PETRAK
ENGRAVING COMPANY
West Water & Wells Sts. Milwaukee.



Better Threshing with Less Power

YOU'VE threshed with the ordinary type of thresher. You know the killing vibration it goes through all the time it is working—the constant shake, shake, shake. You realize the wearing strain—the waste of power this racking vibration **must** cause.

Now, think of a thresher that is practically vibrationless—that works with the smooth-running ease of a piston—that is so perfectly balanced that an 8-penny nail will stand on any level part of it while in operation! And with that—a machine that saves all the grain you feed into it.

That's the Aultman-Taylor New Century Thresher!

Now, let's look into the "why" of the smooth and economical operation and perfect separation of the New Century.

Hyatt Roller Bearings

Take hold of the end of the cylinder shaft of the New Century with your thumb and first finger. Now give it a twist. It spins as easily as if mounted on the finest bearings. **IT IS. Hyatt Roller Bearings, used on the cylinder shaft of the New Century, make this the easiest, smoothest running thresher on the market.** Tests show a saving of several horse power over ordinary babbitted bearings.

Think what this means to you if you own a small tractor and are looking for a thresher to match your power. Think of the power and fuel it saves!

The Stamp of the old Starved Rooster is Your Guarantee of Reliability.

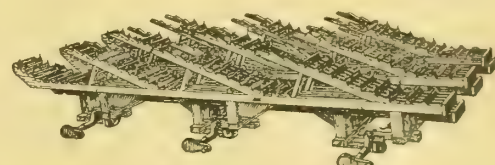
Aultman-Taylor Saves All the Grain NEW CENTURY



100% grain saver. The Universal Rotary Straw Rack and Inclined Open Web

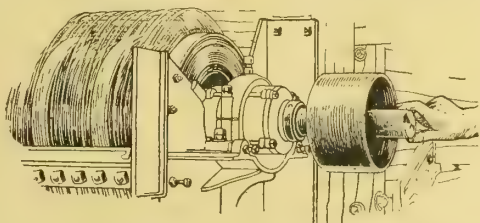
attend to that. These two devices absolutely prevent clogging, double the capacity and insure perfect separation.

Remember too, that the New Century is a



Universal Rotary Straw Rack

This rack gives double the separation of the ordinary vibrating type. It has a two-way movement agitating the straw twice to each revolution of the crank shaft. Thus it moves the straw continuously rearward. It prevents bunching, eliminates vibration and saves power.



Hyatt Roller Cylinder Bearings

Hyatt Roller Cylinder Bearings effect a saving of several horse power in operation of the machine and avoid any possibility of heated bearings. Your small tractor will operate a Hyatt equipped New Century when it would be impossible to operate a smaller size machine without them.

Aultman-Taylor makes four sizes of threshers—all absolutely standard in design and construction. The two smaller threshers are the ideal size for individual use with your small tractor.

Ask any New Century owner. There are 35,000 of them over the country. Or see your dealer—or write us direct, Mansfield, Ohio. Canadian Branches: Portage La Prairie, Calgary and Regina.

The Aultman & Taylor Machinery Co.
Mansfield • Ohio

Thirty-five thousand New Century Threshers in the field today.

Fifty-five Years' Experience Building Farm Power Machinery



When this year's crop

CASE
TRADE MARKS REG. U. S. PAT. OFF. AND IN FOREIGN COUNTRIES.
POWER FARMING MACHINERY

THRESHING will soon be over, and one of the big jobs ahead of you will be to plow the ground for next year's crop. The ownership of a Case Kerosene Tractor and the Grand Detour Plow of suitable size will give you a tremendous advantage.

For instance: a plow working in dry ground is a horse-killing load but behind a Case Kerosene Tractor your Grand Detour gang will, in spite of the unfavorable conditions, come tearing through the tough soil, without waiting for rain to soften things up.

Perhaps the nature of your soil requires your waiting for favorable conditions, so as to plow the ground well, turning under all vegetable growth. Again the ownership of a Case Kerosene Tractor and Grand Detour Plow proves its practical worth. You can afford to wait until the soil is right because every 10 hr. day you work your outfit, will carry you from 6 to 18 acres closer to the desired

Prepare the ground for next year's crop with





has been saved with a Case Thresher

goal—your last furrow to be turned this fall. The rate of plowing will be largely determined by field conditions and the size of your rig.

The 10-18 Case Kerosene Tractor and 2-bottom Grand Detour Plow can plow 6 to 9 acres in 10 hours.

The 15-27 Case Kerosene Tractor and 3-bottom Grand Detour Plow can plow 10 to 14 acres in 10 hours.

The 22-40 Case Kerosene Tractor and 4-bottom Grand Detour Plow can plow 14 to 18 acres in 10 hours.

Write for information on our line of Power Farming Machinery, specifying size of your farm, and sizes of Case Kerosene Tractors and Grand Detour Plows that you think would meet your requirements.

J. I. CASE THRESHING MACHINE CO., Inc.

Dept. DJ-7, Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842



Look for the
EAGLE
Our Trade Mark

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

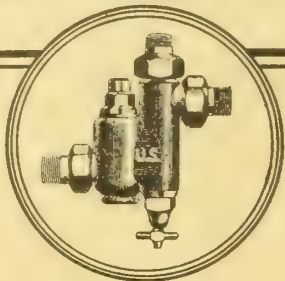
NOTE:

We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

a Grand Detour Plow



U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam traction field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Mention The American Thresherman and Farm Power

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (Total disability)	\$10,000.00
Loss of eye	\$1,990.00
Loss of hand	\$2,500.00
Loss of index finger	\$650.00
Broken leg	\$200.00

Even though the law did not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above when a policy can be secured with us for a minimum premium of \$30.00.

Let us assume all your liability. Write us today for application blanks and full particulars.

**Threshermen's National Insurance
Company, Ltd., Mtl.**

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

What He Least Expected

By HOLWORTHY HALL

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Bobbs-Merrill Co.

FROM the direction of Victoria Park Mr. Cloud, sleek and debonaire in doeskin and cork helmet, tripped gingerly into the middle distance. Kirby beckoned frantically to him.

"Good day, everybody," said Mr. Cloud, not altogether at ease as he joined the group. "What seems to be the excitement?"

"Jim Hartwell says—"

"I said if Hollister here isn't out of Bermuda by Saturday—and if his two precious friends don't guarantee him—I'll cable the Surrogate inside of three minutes—and I mean it!"

And Mr. Cloud, without undue haste or hysteria, slid gently to the ground between Ballin and Kirby, and lay there unconscious; and on his face there was the hurt reproachful look he had sent to Hollister as he collapsed.

CHAPTER XXIV.

Now after Hollister had listened to the revelations of his friend Kirby, and the imprecations of his friend Ballin at Elba beach, and to the mandates of Mr. Hartwell on the veranda; and after he had seen the promptness with which Mr. Cloud fainted at mention of a Surrogate, he began to perceive an occasional knot-hole in the fence of mystery surrounding the group to which he had attached himself. To be sure, he wasn't yet positive of the correctness of his deductions, and his friends were temporarily too demoralized to exchange mind with him, but at least he had enough information for a working basis. Ned Ballin, through the office of Joshua W. Brown, had secretly subsidized him because he was somehow predestined to become a powerful antagonist of Hartwell. Hartwell was openly waging a campaign to remove him. Kirby had granted that Hartwell exercised a high grade of duress over the other three men; and Hollister surmised that it was duress arising out of a financial power. Mr. Cloud had collapsed under a fulmination which included in its scope the authority of a jurisdiction which is essentially financial. Mr. Cloud and Hartwell were co-executors of the Cloud estate. Ergo, the foundation-stone of the underground warfare indubitably rested among the conditions of the will, or among the circumstances of carrying them out.

The death of Diederick, ascribed to the effect of the shock upon a bad heart, had discouraged Ballin and Kirby, and exalted Hartwell. Diederick had been Hartwell's law partner. Wasn't it natural to assume that Diederick knew Hartwell's side of the case? And if Diederick's arrival had been of benefit to Ballin's circle, and if upon his death the advantage had reverted to Hartwell, wasn't it reasonable that Diederick had come to Bermuda to reinforce Ballin? Why not? Diederick had formed a hasty conclusion that Hollister was in Hartwell's employ, and had thereupon shown his instant enmity. It was unquestionably Hartwell who had assaulted Diederick in the hotel corridor. And that was obviously to prevent Diederick from fulfilling his expressed intention of speaking to Mrs. Cloud. And why shouldn't Diederick have spoken to her? Why should Hartwell have attempted to dissuade him by force, unless Diederick, by so speaking, could have weakened Hartwell's strategic advantage? Yet Ballin and Kirby had opined that their position would be weakened hopelessly if Ballin's cousin had knowledge of the attending facts. It was palpably poor teamwork. But didn't Hartwell's conduct argue that perhaps he was less certain of his ground than Ballin had imagined? That he, also, was subject to impeachment in his major premises? And what would that mean except that Hartwell feared to bring these premises

into the relentless light of equity and good conscience?

As a co-executor, what sword could Hartwell wield against Ballin? Against Mrs. Cloud, as a legatee? Against Mr. Cloud, as the other executor?

Hollister got it. It came suddenly crashing through his brain, and stunned him. Hartwell didn't want Ballin cousin for herself—he wanted her for her estate. A second mental concussion shook him to the depths; Hartwell was afraid of him simply because Ballin cousin liked him! Because, as Kirby had said, the lawyer would naturally be afraid of any man who rivaled him. And that was why Miss Rexford had sought to compromise Hollister; that was why Hartwell himself had attempted to injure his reputation—to compel him to withdraw, discredited.

It was manifest that Mrs. Cloud knew nothing of Hartwell's power over her circle, or of her own relation to it.

And from Mr. Cloud's agitation on the occasion of his plea to Hollister on the rocks by the golf links, it was plain enough that he had meant that it was Mrs. Cloud who was in danger. Not her life, surely; but Mr. Cloud hadn't said that! He really hadn't insisted it. He might have meant her inward life—her happiness. Wasn't Hartwell fully capable of wrecking that he married her?

Hollister was keyed to a point where his impulses were rapid, and compelling. He reviewed his findings, and verified them as best he could. And then he set out to hunt for Mrs. Cloud, who despised him.

Although it was half past eight on a fine and mellow evening, Mrs. Cloud was in her room. To Hollister, lingering by the switchboard operator in the lobby, came the return message that she begged to be excused from an interview. Thereupon he put his persuasiveness to the test, and after he had uttered less than a hundred words through the transmitter of the public telephone on the desk, he knew that he had accomplished his purpose. Mrs. Cloud, averse but curious, would be down-stairs in fifteen minutes. And she proved conclusively that she wasn't toying with Hollister's affections, for she was appreciably earlier than her appointment.

At sight of her, he said something meaningless, and put out his hand; but at the look she gave him, he took it back and contented himself with a bow of the type which hasn't been fashionable since full-grown men wore lace on their cuffs. He wasn't conscious of the wide extent of that bow; it got away from him, and made a ceremony of itself. Nevertheless, it had its merits. It struck a note which must have impressed Ballin's cousin; for without showing outward appreciation of it, she was one degree less intangible, less impersonal. No woman, in these perfunctory days of head-jerking and hand-touching, could fail to take notice of a bow like that. Queen Elizabeth would have decorated a man for less.

"I'm awfully glad you came down," said Hollister fervently. He remembered that almost at the climax of their last meeting she had told him to call her "Frances"; he also remembered that at parting she had practically warned him not to address her at all. So that he omitted all direct reference to her patronymic and proceeded. "I was a little worried for fear you wouldn't—and I've so much to talk to you about."

Mrs. Cloud, who, if she hadn't been round and high-colored and healthy would have appeared very slight and ethereal in her filmy dress, all tulle and scattered rosebuds, expressed mild astonishment that he had anything of intrinsic value to convey to her.

came," she said, in rebuttal, "cause for one little minute you sound sincere—and I don't want to be narrowed. Only I wouldn't have come if I hadn't spoken of Ned."

Hollister bowed again. "Would you object to walking somewhere with me? It won't take a great deal, but I don't want to be interrupted, overheard."

Even although his manner was strictly formal, Mrs. Cloud was irresolute. "I should think the veranda would be convenient."

"Would the veranda have been convenient that day you were so anxious to talk to me?" he asked bluntly. "Hollister's cousin grew very red."

"We won't go into that, please."

"But my reason is every bit as important as yours was. And I've promised not to argue with you unless you're willing. Just walk down the veranda with me—we'll be gone half an hour at the latest."

He waved.

"It's so cool to-night—"

"Would you let that keep you from leaving Ned of his troubles?"

Hollister's cousin stopped wavering. "You're serious, Mr. Hollister?"

"Perfectly."

He glanced about her.

"I left a wrap down-stairs—at the dressing-room door, I think—"

"I'll get it!" said Hollister. "I know where it is!"

He was across the lobby and back in in a jiffy, bearing a soft satin evening cloak, which he placed over her shoulders with sufficiently exaggerated tenderness to satisfy himself, yet without sufficient tenderness to deserve a rebuke, though Mrs. Cloud weighed the niceness of the courtesy, and seemed dubious.

"Now!" he said. "Shall we start?"

He was palpitant at the outset; and by the time they passed the wood-carver's shop on the road to the cricket grounds, he was intoxicated by his own sensations. The world lay shadowy and silvery and st-like before him; the path was a ribbon of platinous whiteness, black where bodies of tropical foliage had massed against the moon. The air was clear and vinous, and saturated with the precise volume of the damp night to accentuate the fragrance of roses and honeysuckles from near-by lawns and garden. From afar the drumming of native banjos, and the sound of boisterous native voices, muffled and muted by the distance, added the touch of unreality, and of romance. Hollister's eyes glistened, and he inhaled lightly.

"I've been trying so hard to see you," he said, forgetful of his covenant. "It's been a long time—terribly long."

He was also absent-minded, else he had enjoined him for the moral act, without intending to hold him to the letter of the law.

"Of course you realize that after Edith died so queerly, I had to make her tell me the truth. She didn't want to make her."

Hollister inclined his head.

"And of course you believe her implicitly?"

"Implicitly."

He wasn't unprepared for that verdict; he was disappointed him.

"I hope you don't mean that you're open to conviction," he said lamely.

Hollister's cousin took a score of paces before she replied.

"Why—no. I don't mean that. I'm not in conviction on almost anything. I'm not so sure of myself as I used to be—there was a time when I had ignorance and ideals."

"Not a bad combination," said Hollister. "Except recently."

They had reached the junction of Pitts Bay and Fairyland roads, and looked at each other interrogatively.

"So far you haven't said anything that you could not have said at the hotel," Mrs. Cloud reminded him.

"I know it. Shall we keep to the point? All right?"

"But I didn't come out to converse," he protested. "I came to hear about it!"

"You said you had something remarkable to tell me."

"And so I have. Only I don't know exactly how to begin."

"Just begin," she advised him. "Don't try to find nice phrases—just go ahead."

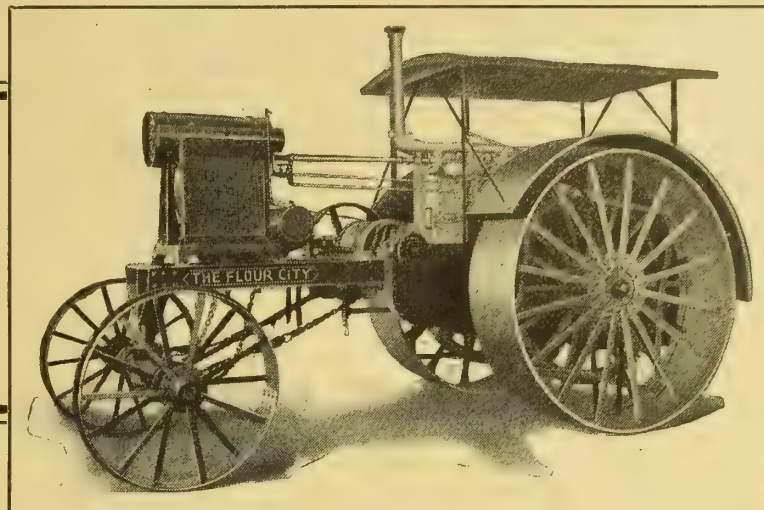
Hollister found great difficulty in serving the impersonal demeanor required by his agreement. He was both impressionable and ingenuous, and it was almost beyond his endurance to round himself by the seductions of

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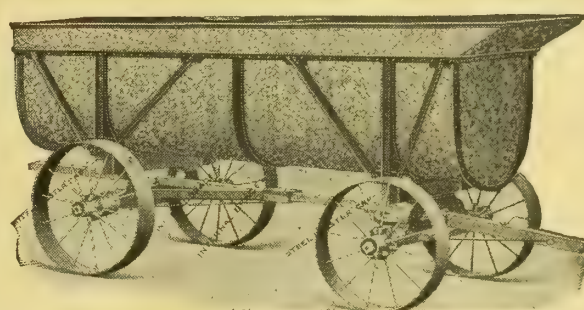
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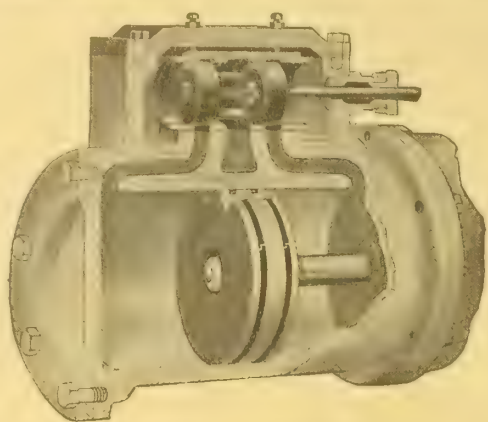
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a Bermuda night, and attach himself to the prettiest girl in all the Bermudas, and yet keep his voice steady and his nerves flaccid and quiescent. He looked at Ballin's cousin, and sighed inaudibly, and reflected upon the futility of human achievement.

"Well," he said, "I suppose you know what happened out on the veranda today?"

"My brother-in-law?"

"Yes. It's all over town by this time."

"How silly!" said Ballin's cousin. "Hasn't anybody ever been prostrated by the heat and—and exertion before?"

Hollister had also heard that specious rumor.

"Nobody's hinted that Mr. Cloud hadn't exerted himself, then?"

"Why, no."

"And nobody's suggested that he's the only person in six months who's been prostrated by the heat?"

"Why—?"

"Because," said Hollister, "neither one of those reasons is within a thousand miles of the truth." He glanced at her, and with great effort of will he returned his eyes to the front. "Mrs. Cloud, won't you believe that what I want most is to make peace with everybody? And have all of us happy again? Won't you forget a tiny bit of what's passed—just enough so that you can keep on trusting me? I'm not getting any nourishment out of this—and I'm venturing a good deal—but I'll be absolutely satisfied if you'll credit what I say. That's all I ask for. I don't care what you think about me—I mean, I do care a lot, but that's secondary—but you've got to realize that I'm not being selfish. I'm not trying to protect myself. I'm doing what seems to me to be best for everybody concerned. So—I want you to know that Mr. Cloud wasn't prostrated by the weather, or anything like it. He was literally frightened out of his wits. He was knocked out by a threat. And—"

Ballin's cousin laughed softly.

"But, Mr. Hollister, I've been with Mr. Cloud all the afternoon. He's in bed with a raging headache. He told me himself how he went exploring over in Paget and felt faint in the sun after he'd walked too far. He hasn't been in very good health. He's been distressed, I know; but as soon as he had a cold compress on his head—"

"It happens that I was there on the veranda," said Hollister. "And I'd been there for some time. And if Mr. Cloud really was prostrated by the heat, don't you think it's rather curious that the minute he picked out to be prostrated in was the exact minute he was threatened by Mr. Hartwell?"

"Threatened? That's twice you've used that word! How could Mr. Hartwell threaten him?"

"I'm not absolutely sure how he could—all I'm sure of is that he did! And I've figured out what the matter is. I've figured out that Ned and Pete and your brother-in-law have kept a good many details away from you in the hope that they could squirm out of their troubles without bothering you needlessly. But it's only a matter of time now—and perhaps Ned and I don't agree about you. Perhaps he thinks you can't stand bad news. I think you can rise above it. And it's worth taking a chance—"

Ballin's cousin was somewhat less conventionally dignified.

"Mr. Hollister, you—you needn't prolong it—if you're going to say anything unpleasant."

"I certainly won't prolong it a second. You're the cause of the whole hullabaloo. And if I only had—"

At length Ballin's cousin urged: "Yes, Mr. Hollister?"

"I can't say it!" he blurted. "It's too nervy! You think it over for yourself—it's centered in your estate! It's money!"

Ballin's cousin exclaimed aloud.

"In my estate?"

"Yes—your husband's, I mean. Mr. Cloud and Mr. Hartwell are the executors, aren't they? If you can get somebody to search into it for you, I think you'll find out a queer state of affairs. Important things are being kept away from you—because the men who are your friends are afraid you'd be shocked, or—something. And what knocked out Mr. Cloud was a reference by Mr. Hartwell."

"But I don't understand—that was your theory yesterday, but it can't be so bad as that—"

"So if you want to save yourself and

every one else a vast amount of pain—

Unconsciously they had veered from the highway, and taken the path of the terraces which overlooked the Grand Sound and Agar's Island and the Aquarium, and as they approached the family wall, with its *chevaux-de-frise* of bamboo and Spanish bayonet and oleander, the heard voices, excited voices, a man and a woman's, on the lower lawn. Ballin's cousin touched Hollister's arm.

"There's some one there! Let's go back before they hear us!"

"Wait!" objected Hollister. "Listen!"

"Mr. Hollister!"

"Sh-h-h!" he whispered impatiently.

"Isn't that Hartwell? Isn't it?"

"Mr. Hollister, if you don't—"

"And Miss Rexford!" He seized her hand and drew her into the shadow.

"Hush! Please!"

She struggled furiously. "It's despicable! It's horrid! I'm—"

From the lawn Hartwell's big laugh boomed ominously, and was cut short, though in a sudden recurrence of discretion.

"And you call yourself a first-class detective!" he sneered.

"Yes—and I am!" retorted Miss Rexford's throaty contralto.

Ballin's cousin was suddenly tense and rigid; and the hand she had laid on Hollister's arm tightened around his relaxed biceps. In the pale light he could see that the pupils of her eyes were dilated, and that her lips had parted in horror. Quite logically, he was gratified at her display of emotion, which was in effect, a corroboration of what he had failed to persuade her; but in the next moment he was over-whelmingly sympathetic. At last he had stumbled upon a line of communication which might lead to vindication.

The voices grew in volume and clearness, and slowly became less distinct. Hartwell and Miss Rexford were walking up and down the lawn as they debated. Ballin's cousin had allowed the satiny cloak to slip from her shoulders; Hollister recovered it carefully and replaced it, but she was too intently thrilled to note the attention.

"I might have known you wouldn't come through without a rake-off," said Hartwell contemptuously. "You never intended to play square, did you? Your word's as good as your bond—just about." "That isn't it," said Miss Rexford shakily. "That isn't it, and you know it! You lied to me at the beginning, and you've lied to me ever since! You haven't a decent thought in your head—you haven't a truthful word in your mouth—"

There was a short cynical laugh from Hartwell.

"A hell of a moralist you are! Ten wrongs make a right—that's your argument!" His voice changed sharply. "Well, are you going to come through, or aren't you? Now's your chance. And you better think twice, Edith—if you get in Dutch, you're in just as deep—just as deep! And there'll be this difference—I'll have to pay through my nose to get out; but I can pay, and I can get out—and you can't! Think it over."

"I'm not thinking about myself, just—"

"Oh, you're not! Great stuff, the golden rule! Went to church last Sunday, didn't you? I suppose you were thinking of yourself when you flung flamed Hollister into a bow-knot risk in this same place, were you? Or when you edited Mrs. Cloud's correspondence for her? Or when you lied to the judge—or when you boosted me to Mrs. Cloud. Oh, no! An extra hundred a week—that's all you thought about! Con down to earth—how much more do you want?"

Hollister almost cried out at the agony of his biceps. Mrs. Cloud had found a hitherto undiscovered muscle.

"I don't want anything more—I'm simply telling you I can't go on."

"That sounds fine and heroic, doesn't it? Very dramatic—brave Joan of Arc. Well, you will go on!"

"No, I won't!"

"You don't seem to remember that I can make you!"

"I—you can't!"

"Oh, I can't, can't I? You'll damn soon know whether I can or not!" His tone altered again, and became wheedlingly patronizing. "Look here, Edith—don't be a fool! After we've deported Phyllis Hollister, it won't take us two weeks to close the deal. And he's wise all right, all right! They'll have him on the carpet to-night, if they haven't already, and they'll shoot him back to

York so fast he won't know whether
's afoot or horseback! And then we'll
sighten out for the finish. And there's
good bit in it for you."

"I don't want anything more, Jim!
thing you could give me would make
y difference now. I can't go ahead!"
The pair halted not twenty feet distant,
d Hollister held his breath. The girl
his side was still motionless, torpid;
t he feared that her self-control might
sert her at any instant—and this was
time to lose a single sentence.
"You aren't thinking I'd double-cross
?" said Hartwell, with a fair ap-
proximation of genuine feeling. "I'm
t that kind of man, Edith. I wouldn't
uble-cross both parties to one deal!
hat's got into you? You aren't jealous
Mrs. Cloud—"

"But I am jealous, Jim! I'm jealous
cause she's got what I haven't!"
"What's that?"

"A decent man who loves her!"
Hartwell laughed mockingly.

"Edith, you can't work any of that
ous stuff off on me! You're no angel
purity! Cut it out, and be sensible!
e told you five hundred times that
er this has blown over, you get what
u want. Any apartment in New
ork you may select, and—"

"Don't, Jim!—don't!"

"Oh! Lady Disdain, aren't you? So
u're off that, too?"

"Please don't, Jim!"

"Well, what is it? What's the idea?
hat are you driving at? What's your
ce?"

Miss Rexford's voice was slightly
oked.

"It's been such a rotten, rotten game,
n—all the way through! I didn't
ow it was going to be like this! You
d to me, Jim! If you hadn't, you
ow I wouldn't have got into this!
u said Mr. Cloud was crooked—
u said the boys were crooked! I
ought you meant that—then! I
ought so for a little while after I'd
st them. I thought you—I thought
u cared for her! And then long before
t, Hollister came—"

"Shucks! Two days after I hired
u, you knew what for!"

"Yes, I did; but—"

"Well, what made you stick, then?
hy didn't you quit when you had
e chance?"

"You know why, Jim."

"Suppose I don't?"

"Because—because of you."

"Am I not the same man as I was
en?"

"No—no!"

Hartwell uttered an exclamation of
gust.

"Bah! And not so damned long
o you were bawling because I didn't
s you! Say! Look at my side of it!

hen you threaten to quit cold, what
urity have I got that you've been
are up to now? Thought of that?

t haven't I taken you on faith? Have-
I believed everything you told me
out your mush and slush with Phil
ollister? I could take that two ways—
t I haven't. I've depended on you.

ay can't you believe me once in a
ile? I haven't changed! I've got
actly the same ideas I had two months
o. I've got exactly the same plans
you. We'll put this deal over one
y or the other—and if we can keep
away from Hollister until Saturday,
en he's leaving, and then start the
drive, we'll cash in! That's positive!

ed then—everything just as I've prom-
d! I wouldn't let money stand in
e way! Diederick's gone, and I've
t the goods on all the rest of 'em.
you've got to do is to boost, boost,
ost—"

"B—but—I don't want to!"

"Look here," said Hartwell, exasper-
d. "Damn it! I'll pay in advance!"

"I'll give you a check to-night! I'll—"

"But that isn't it, Jim. I—"

"Well, what in the devil do you want?"

"I don't want anything, except—I
nt to feel clean! And I can't go on
I can't! It's too much for me—too
uch! She's been so wonderful—"

"She! Listen, Edith! Look up here!
ok at me! That's more like it! Now,
en! You've got a fool notion that
s a good woman, haven't you? If
can prove that you're dead wrong—
t I know this crowd from A to Z—
nt not one of 'em is any straighter
n—than—"

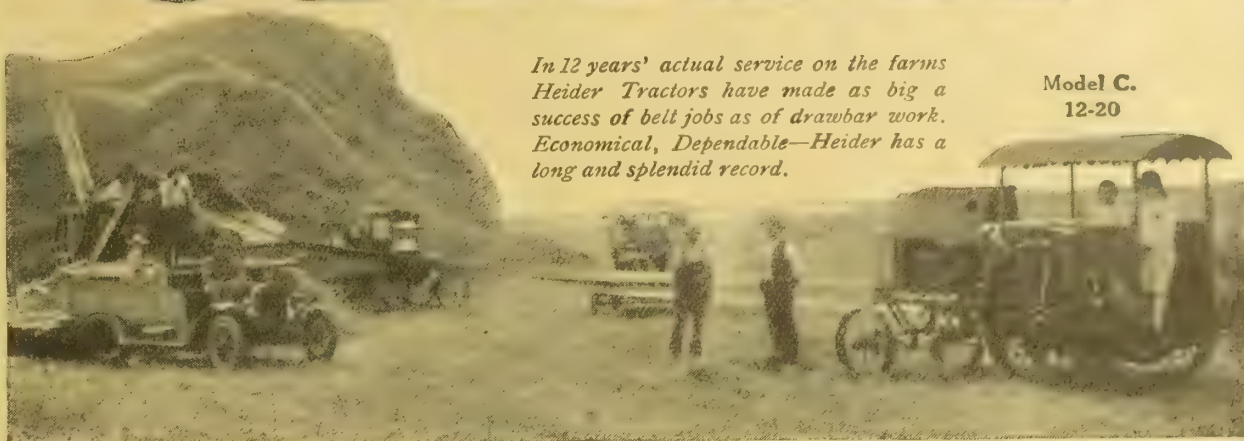
"Than you are?"

"Let it go at that. If I can prove
t to you—"

"You couldn't ever—"

"I said, if I could—would you go

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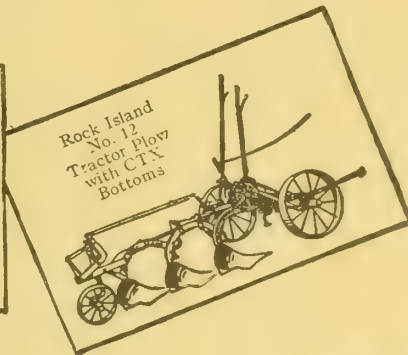
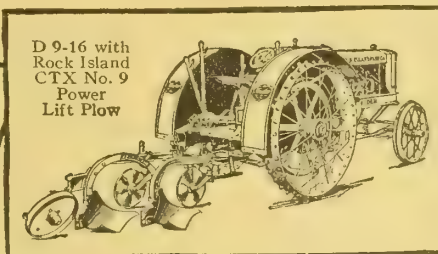
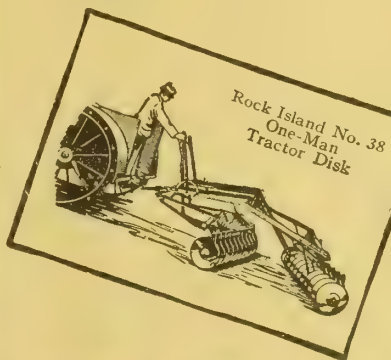
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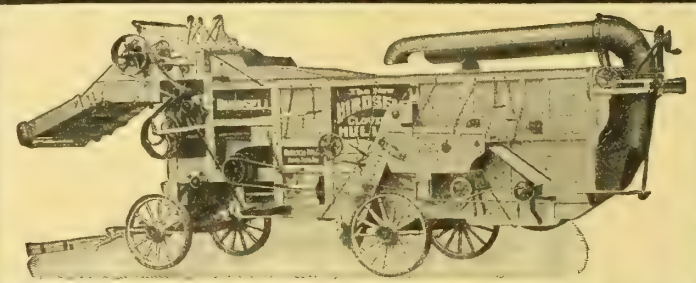
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"Jim, I told you—I don't know *what* to do—I don't want to give you up; and yet—"

"Listen to me, Edith! I've been holding this for an ace in the hole! Don't you know why Hollister was so flabby when we went to court after Diederick was hurt? You know he didn't lay a finger on Diederick up there! Where was Diederick—what part of the floor? How did Hollister get there so quick? How was it he got there at all when he wasn't in his own room, or down-stairs? He didn't *fly* there, did he? Who else disappeared about the same time, and didn't show up during all that jumble—and came down later, talking about a *nap*! Get it?"

Hollister, crazed with anger, was trembling so violently that he anticipated instant discovery. Ballin's cousin was as carved stone. Both of them, however, sensed the fact that they would profit by remaining silent.

"Jim—why—why, Jim—"

"I tell you, I've got 'em all four ways from the jack! If any of 'em opens his head, Cloud goes up the river! He knows it—they all know it! And that pair of kids can't wriggle out! They can't *dodge facts*! And it's devil take the hindmost—they're all bad as we are, and worse! Why, I'm doing a *kindness* for sissy Cloud—I'm saving the two boys—I'm saving Mrs. Cloud! And all I need is you!"

"Jim—" Miss Rexford's voice was husky. "Jim—you know I can't—I can't believe *that*—"

"You've got to believe it! It's the *truth*! I tell you, I saw him come out of her room!"

There was a brief silence. Hollister's chest expanded and his hands closed spasmodically. Then all at once Miss Rexford was sobbing.

"It won't do any good to blubber," advised Hartwell more gently. "Buck up, Edith—you and I don't need to act hysterical. We're going to land this man Cloud where he belongs—unless we get what we want."

"N-no, we're not!"
"What!"

"I—I can't, Jim! I'm through!"
"After what I've just told you?"

"I don't b-believe that, Jim!"

"And you claim you love me?"

"I d-do—I do—but—"

"You're going to shut up?"

"I w-won't tell—but I can't help you—any more."

"Because you've fallen for that mealy-mouthed girl?"

"She isn't, Jim—she's—"

"I know what she is—and I've told you! And still you'll—why, you lying little stool-pigeon! The last time—you know damned well you can't stop *me*—are you going to stick by me, or aren't you?"

"N-no, Jim, I'm not—" The sentence ended with a gasp. Then, after a moment: "Jim—Jim, dear—you—you wouldn't do that!—Put it up, Jim—please—"

Hartwell laughed scornfully.

"I thought I'd just show you. Here's where it lives—see? In my hip-pocket, right where it's handy. See how quick I can get it out? Seven little messenger boys—little .38's. If you stick by me, and we flivver, the worst I can get is a suit for conspiracy—and they can't prove it. But if you *don't*, and I'm in trouble, Edith—dear, sweet Edith; helpful little Edith; you lying little hypocrite—I've got this for both of us. Get that? If you turn me down cold, and go to Ned Ballin, I know just as well as you do what'll happen. But don't fool yourself—they'll never have the laugh on *me*! When I'm licked, I'll make my own exit—and I'll have company, too! Look at me! Ever catch me bluffing? No? Well, by God, if you peach—you'll never need a doctor, and neither will I!"

"Jim, dear—*won't* you understand? Please, *please*—"

"You hypocrite—and liar—and coward—and still," said Hartwell, lowering his voice, "I want you! Even after you threaten to leave me in the lurch at the last minute! Even after you talk about blabbing!"

"Do you, Jim?"

"You know I do, you she-devil! Here—stop looking at me like that! Maybe you can dazzle a small boy that way, but you can't *me*! Stop it!"

"I do love you, Jim!"

"*Show* it, then! Keep your word! And afterward—sh-h-h!"

"What is it, Jim?"

"Heard something! Keep your voice down. Listen a second."

"I don't hear anything."

"Neither do I—now. Somebody over on the road, I guess. Well—"

"You frighten me, Jim."

"How's that?"

"I didn't know you carry a gun with you."

"There's a good deal about me you don't know yet."

"Is there, Jim?"

"There sure is. What are you trying to get away from me for?"

"Is it—loaded?"

"Not right now. I only showed it to you so you'd have something else to think about. By bedtime it'll carry enough to cut two bridge tables down to one game of solitaire. What's the matter with you?"

"I don't know, Jim. I'm afraid."

"Afraid of what?"

"Everything."

"Nonsense! I'll get you through all right!"

"But I don't think you can, Jim."

"Why not?"

"I can't tell you—only I'm afraid. Everything's so big and tremendous—and I'm so little and insignificant. I feel as though something's going to step on me, and crush me like an insect."

"You're a fool, Edith—don't lose your nerve!"

"It isn't nerve—it's deeper than that. Things are suffocating me, Jim."

"It's only a couple of weeks more."

"But every moment of those two weeks—oh, Jim!"

"Take it easy, old lady—there!" After a very brief hiatus: "Damn it, you're not responsive enough to break any world's records."

"What?"

"You might show a little enthusiasm without straining yourself. Or do you save up all your pep for histrionics?"

"What do you mean, Jim?"

"Nothing—oh, nothing! Only you were so proud of the way you worked up your scene with Phil Hollister—I

was just wondering why you couldn't act for me, too. It looks as though your fake kisses are a lot better than the real thing. Try the fake ones on me for a change."

"You're cruel, Jim—always."

"That's all you understand. You're as dangerous as a hell-cat. If I don't cage you, you'll claw!"

"Please, Jim—"

"Well?"

"Kiss me just once—"

Again a pause.

"This seems to be your pet spot for asking men to kiss you, Edith. Haven't missed yet, have you?"

"Jim! I *loathe* you—"

"No, you don't—you're crazy about me. Here's another! Now—is it all settled?"

"I—think—it—is."

"And you'll stay with me to the limit?"

"No, Jim."

There was a loud exclamation of revulsion.

"What in *hell* do you mean?"

"Don't strike me, Jim—I'm not afraid of you! I can't let you go ahead."

"You can't let me—"

"I can't let you marry her."

"But, you idiot, I've told you that won't make any difference between us—"

"Jim! Jim! I want you myself! She can't have you—she can't! I won't let her!"

"Great God, haven't I *told* you what it's for? You don't think I care a plugged nickel about her, do you? I *want* *that* money!"

"But it can't be—"

Hartwell's voice rose.

"When I'd send Cloud to Ossining rather than let loose my grip, do you think I'll let you stand in the way?"

"You'll have to, Jim."

"I will *not*! I—"

"You can't have her. I'll tell—"

"You will, will you!"

"Jim—don't! You're hurting me You—"

"Will you promise—to keep your mouth shut?" he panted. Her response was choked and strangled. "Answer me—yes or no?"

(To be continued.)



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If you are in need of threshing machinery you may save yourself disappointment by ordering now and specifying immediate shipment.

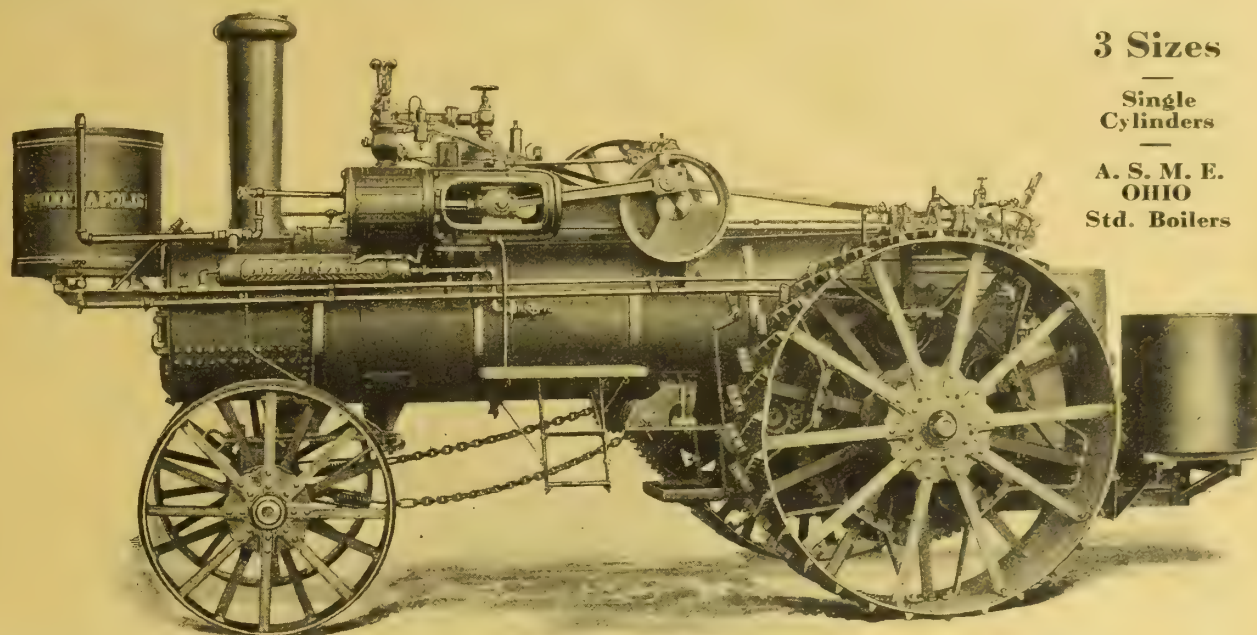
Our factory is going full blast but the demand for Minneapolis Machinery is unusually heavy and is likely soon to exceed the supply.

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Can be relied on as to fuel economy, light upkeep expense, ease of operation and general satisfaction

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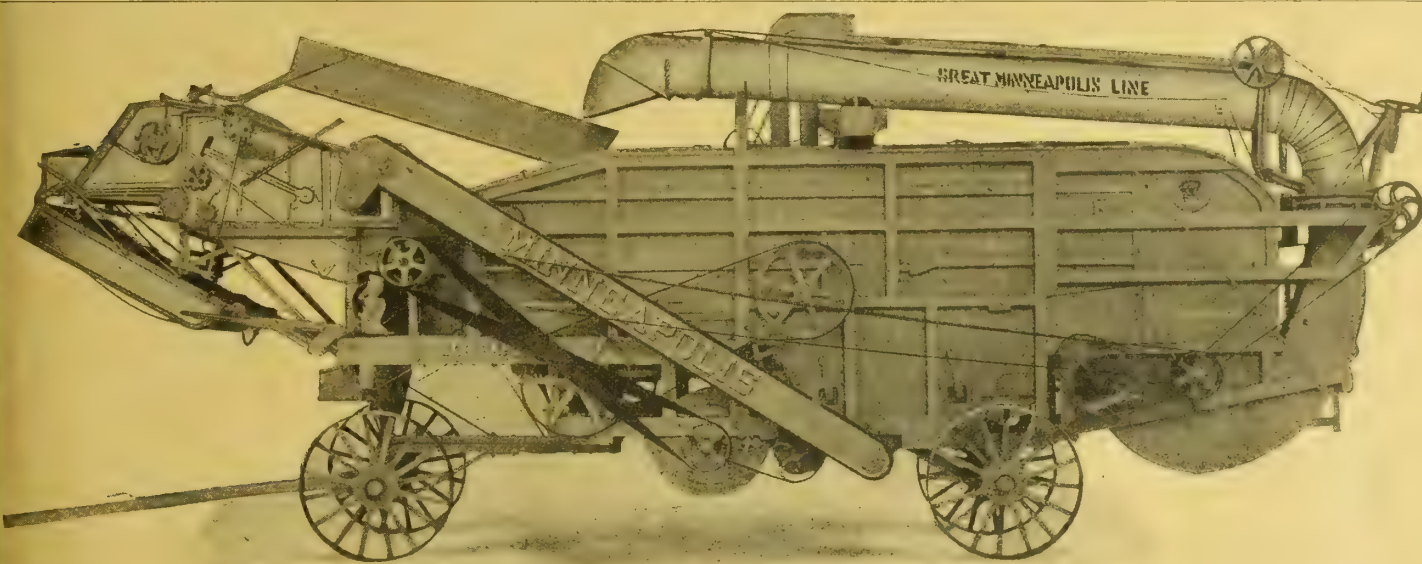
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Minneapolis Threshers are in great demand. They are Popular because Satisfactory to both the thresherman and farmer. Fast threshing, thorough separation, good cleaning, ease of operation, light up-keep expense and durability make the Minneapolis the Popular Thresher. Built in 9 sizes with all labor saving attachments and to suit any power.

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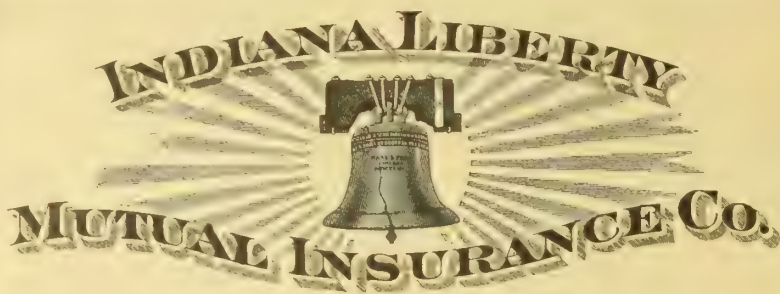
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You Can Be Proud of This Name on Your Compensation Insurance Policy

What Other Name Would Mean That Profits Are Returned To You?

Many states compel threshermen to operate under the Workmen's Compensation Law, while others leave it optional whether they operate under the Workmen's Compensation Law or Common Law. The amount of their liability to employees is reduced by operating under the Workmen's Compensation Act. No law suit with big court cost and attorney fees to pay. The law in many states makes the farmer pay for injuries to a thresherman's employee, if the thresherman is not financially able.

Protect your customers. Provide compensation to disabled employees. Operate under the Workmen's Compensation Act and insure in a good Mutual Insurance Company that returns to you the profits. Our company will do all this for you. Here's why you should insure in the Indiana Liberty Mutual Insurance Company.

It has \$10 for each dollar it actually owes.

Its organization has saved its threshers policy holders approximately \$350,000 with an average of approximately \$70 per year per policy.

It has the official endorsement of the Threshermen Brotherhoods of Indiana, Illinois and Kentucky.

It has loss reserves as required by law of more than \$35,000 with approximately \$10,000 of losses to pay.

Illinois Threshermen may write to Davidson & Boyer, 112 South Main Street, Decatur, Illinois, for information.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY
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INDIANAPOLIS, IND.

Mention The American Thresherman and Farm Power

Boys and Girls

Who is It?

I've a dear little playmate. Who is it?
Now think.
Her dress, it is white; her nose, it is pink;
I don't like to handle her roughly, because
I think she carries sharp pins in her paws.
I thought she was very cleanly and dainty
and neat.
But, Oh dear! She washes her face with her
feet.—Selected.

Can You?

Now every one of you "cousins" sit down on the grass in the shade of this big tree, and I will tell you of a wonderful meeting that was held—well, I'll not tell you when it was held, but see who can guess, when I get through, when it was held and where.

But I can begin my story as all good stories should begin with "A long time ago—" for this much I will tell you, the meeting was "a long time ago." I will not only tell you that the meeting was "a long time ago," but I will tell you that it lasted a long time, too. For fifty-four days, from the tenth of May until the ——— of July, men had been thinking and talking about doing a very serious thing. These men were representing people, some of whom thought they ought to take the serious step they were talking about and others did not. But in one thing all these people agreed—they wanted to be free and independent. The question was, how to go about it.

But it had been noised about, in — where the men were meeting, that this day, the ——— of July, they would cast a deciding vote. So crowds had gathered in the street, in front of ———. It was a hot, stifling day. In the room where the men were meeting sat John Hancock, who presided; fat, red-faced John Adams; Thomas Jefferson; Benjamin Franklin, now an old man of seventy; Roger Sherman, who was a shoe-maker; and Robert Morris and Charles Carroll. It was almost two o'clock before the final vote to do this serious thing was taken. But the moment the thing was done, a little boy, who had been standing at the door, ran into the street, and looking up at the belfry, where the old, gray-haired bell-ringer had gone, to be ready to announce the news, shouted:

"Ring! Ring!"

And "ring" he did and all the people knew that ———

Now how many of you can fill in the blanks? —"AUNT JANE."

From Our Boys and Girls

DEAR AUNT JANE:

I want to join your circle. I am a girl thirteen years old. My hair is light brown. I go to school every day. I am in the eighth grade. For pets I have two cats and one dog. The dog's name is Tommie. My

father takes The American Thresherman and Farm Power. I enjoy reading the Children's Page. I can crochet, and play the organ. I take music lessons every week. I have one brother and no sister. His name is Henry. I hope to see this letter in the paper.

Your niece,

Bay, Mo. SOPHIA BOCK.

(You may like to read what is said about music lessons in the Woman's Department, Sophia.—AUNT JANE.)

DEAR AUNT JANE:

May I join your merry circle? I am a little girl twelve years old. This is my second letter to you. I like to read the Children's Page. My papa



Which do you think looks the happier, Mary or her kitty? They live in Marshall, Oklahoma. Mary's and Kitty's last name is Semrad and you will find a letter from Mary's sister, Agnes, published this month. She forgot to tell us what kitty's first name is, if she has any "first name" besides "Kitty."

takes The American Thresherman and Farm Power. My father has a threshing machine and an automobile. I have five pets. Their names are Bird, Dog, Mable and Polly. My birthday comes on April the eighth.

Your niece,

LUCY HANSEL.

Tutzville, Pa.

(April is a beautiful birthday month, Lucy.—AUNT JANE.)

DEAR AUNT JANE:

This is my first letter. My father takes The American Thresherman and Farm Power. I would like to join your circle. I live on a farm of

Repair Your Own Boiler Tubes

This tool enables a man who never had any previous experience to put new flues in a boiler, or repair old ones and do a better job than an experienced boiler maker can do in the old way.



Be sure to give size of flues when writing for price.



Thickens Flue in the Sheet

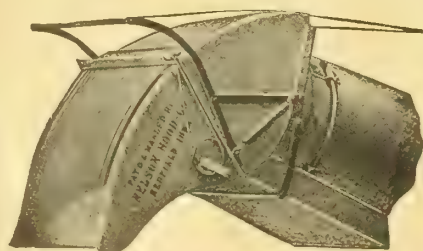
The same blow that beads the flue expands it. Thus the flue is thickened in the sheet as shown in picture to the right. Never roll old flues. It makes them thin. Note picture to left. Use a Morris Beading Tool.

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Kansas City, Mo.

Mention The American Thresherman and Farm Power



The "OLD RELIABLE" NELSON HOOD for Pneumatic Stackers

First Stacker Hood placed on the market that cleaned the straw of dust and rust and deposited the straw on the stack like a slat carrier.

It has been on the market 5 years longer than any other make and will be there at the finish.

Other later makes of hoods have already dropped out, and the last of them are trying to exist by being furnished free with other goods. Their principles were not right, and the people have found it out.

We are making the "Old Reliable" Hood in the regular size, also in a special small size for the small size separators which have a small blower pipe.

You can get these hoods from your thresher company or order them direct from us. Please write today for catalog and prices.

Nelson Hood Company, Redfield, Iowa

two hundred and eighty acres. For pets I have three cats, a lamb and nine dolls. My father owns a Dodge car. I like to read the Boys' and Girls' Page. My father owns a share in a threshing outfit. I am a girl twelve years old. I go to school every day, and am in the eighth grade. I have a mile and a half to go to school. Faye Mollon is our teacher and I like her very much. I did take music lessons but my music teacher got sick so I could not take them for a while, but will soon start again. I have no sisters or brothers but have the neighbor children to play with.

Your niece,
GOLDIE NIBLOCK.

Chesaming, Mich.

(You must be busy caring for a family of nine dolls, Goldie.—AUNT JANE.)

DEAR AUNT JANE

As I see so many nice letters from the boys and girls in The American Thresherman and Farm Power I thought I would write, too. I also like the pictures. I am a little girl seven years old and am in the third grade. I have three brothers and one sister. I am sending you a picture of my little sister, Mary. My papa owns an OilPull tractor and I hope I will soon see my letter and picture in print.

Your niece,
AGNES SEMRAD.

Marshall, Okla.

(Thanks for dear little Mary's picture, Agnes, and for your nice letter, too.—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl eight years old. I have three brothers and two sisters. Their names are Howard, Raymond, Lorenia, Allen, and Marabelle. Howard will be twelve years old September 5, Raymond will be seven November 6, Allen will be three January 20 and Marabelle was born January 31, 1919. Lorenia and I each got a nice doll last Xmas. We like to play with them. We wash dishes, gather eggs, feed chickens, take care of the baby and lots of other things. I can bake custard, biscuit and help mamma to cook. We have about sixty-five little chicks. I like to read the Children's page. This is my first letter to you and I want to surprise papa. I hope to see this in print.

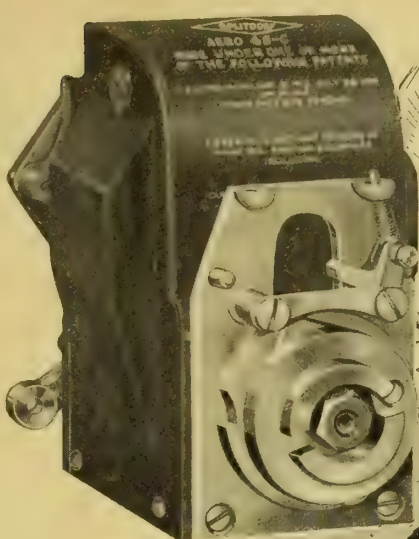
Your niece,
WILMA ACKLEY.

West Finley, Pa.

(I am glad you help mamma so much, Wilma.—AUNT JANE.)

DEAR AUNT JANE:

I have been reading the Children's Page in The American Thresherman and Farm Power so thought I would write a letter too. I am a little girl seven years old. I am in the second grade in school. We live on



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a farm of one hundred sixty acres. We have five horses, and ten head of cattle. I help mamma take care of three hundred fifty little chickens and seven goslings. I have three brothers. My papa has a tractor and an engine and an automobile. For pets I have four cats. This is my first letter and hope to see it in print. My papa takes The American Thresherman and Farm Power

Your niece,
MARGUERITE KROLL.

Prosser, Nebr.

(How many little ones in your chicken family!—AUNT JANE.)

DEAR AUNT JANE:

I live in Graysville. I am a little girl seven years old. I have black eyes and black hair. I have two sisters. Their names are Della and Daisy. I go to school every day. I am in the second grade. My papa has a feed mill. He has an I. H. C. engine, one big one and one small one. He wants to sell the small 6-horse power engine. We have a Ford car. We have one cow and about seventy chickens. I have for pets two cats. Their names are Tom and Whiteface. We have a new coaster wagon to play with. My

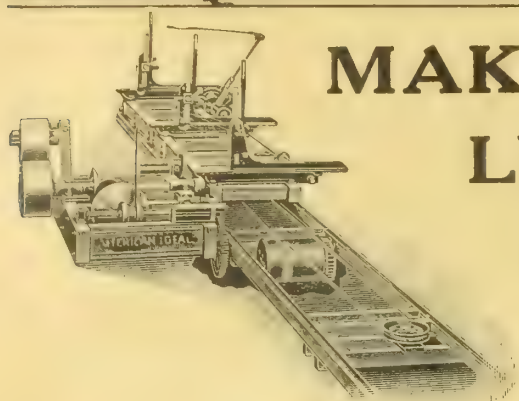
father has a threshing machine. He threshes in summer and grinds feed in winter. Papa takes The American Thresherman and Farm Power and I enjoy reading the letters on the Children's Page, so I thought I would write a letter. I hope to see this letter in print.

Your niece,
GERTRUDE FORSTER.

Captina, W. Va.

(Write again, Gertrude.—AUNT JANE.)

Big orchards of the country are finding the tractor to be a necessary part of their equipment.



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Mention The American Thresherman and Farm Power

THE UP-2-DATE CONCAVES



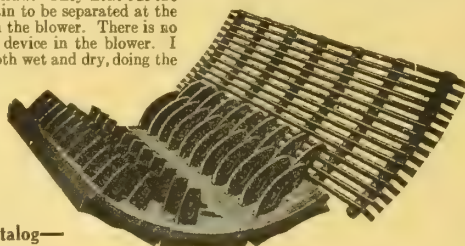
When we attend threshermen's conventions and talk the merits of our concaves, some threshermen always accuse us of talking through our hat, so we let the threshermen of long experience do the talking for us.

Hear What John A. Scott Has to Say

John A. Scott is president of the Oklahoma Brotherhood of Threshermen and is one of the oldest Threshermen of the southwest. For putting the brakes on the legislators he has no equal. We sold Scott two sets seven years ago for two very old separators; last year he bought two new 36" separators, set the new concaves aside and installed the Up-2-Date.

Mr. Scott writes, Nov. 11, 1919, as follows: "As you request that you would like to hear how I like the concaves, I will state that the teeth in them are as nearly indestructible as concave teeth could be made, in fact the Straw Riser teeth are indestructible and after a hard season's run they show no signs whatever of being worn. The teeth have a great rubbing surface owing to the width of the teeth. I would not give the Straw Riser concaves for any

device I ever saw for separation of grain from the straw. They float out the straw clear over the grates, thereby allowing the grain to be separated at the cylinder end where it should be separated and not in the blower. There is no earthly use to pay out \$200 to put a grain saving device in the blower. I used the Up-2-Date this fall in long, tangled straw, both wet and dry, doing the most perfect work we ever did, and although the season was wet there was no such thing as back lashing or slugging, which should surely recommend them to all users of gas or steam tractors that are short of power, for they decrease the draft surprisingly as the straw floats out as fast as it enters the machine. They will make any OLD RATTLETRAP OF A SEPARATOR do the work of a first class machine."



Send for Our Threshermen's Specialty Catalog—

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Separator Steering Poles, Separator and Engine Belt Guides, a new Belt Guide for Rumely Oil Pull Tractors, Vacuum Non-Slip Pulleys, fool-proof short or long shaft Friction Clutch Pulleys, Beading Tools, Flue Cutters, the largest line of Separator, Engine, Gas Tractor, and Auto Automatic Couplers, Pulley Covering, Belting, and lots of new things the threshermen need. If interested in the concaves and would like prices, send name, width, number of bars and we will quote you prices.

Wm. Penn Jones Implement Works, 1314 Washington Avenue, So. Minneapolis, Minn.

Mention The American Thresherman and Farm Power

Hitting the Rails for the Harvest Fields

BY GEORGE F. PAUL

TWO dollars and twenty cents was the exact sum and no amount of adding could make it any more. Out of a job and with no immediate prospect of getting work, I was ready for any whirl of the wheel of Fortune.

"What do you say to striking out for the harvest fields?" asked Jim.

"I'm with you, Old Scout," and we struck hands to clinch the bargain. I invested in a blue shirt, a big bandana handkerchief and an extra pair of socks. Jim got his stuff and that evening we were well started on our trip. We had decided to strike for Minneapolis as our objective point and ship out of there to North Dakota, so we selected a Minneapolis & St. Louis freight train. We settled down in a vacant corner of a coal car; at the time it was loaded with long iron rods. To add to my misery, my partner, out of mischief, kept saying, "Better look out there, kiddo, or that iron will push your supper out of your backbone if it ever starts to slide."

Well do I remember that first night. About midnight we pulled into Monmouth from Peoria, where Jim passed word, "Here's where they make up another freight train for Oskaloosa." Vacating our private car—we dodged around the yards watching the brakemen, or "shacks," as Jim called them, while they made up the new train. Half an hour later we caught the same car as before, only now it held two additional passengers. One of these men had a paper sack containing some greasy remnants of chicken, two pies and several sandwiches. He was generous enough to share this with us, and seldom have I tasted anything better than this midnight lunch, the steady pound of the wheels furnishing the music and the acrid smell of the engine smoke furnishing the sauce for our meal.

In the early morning we crossed Jim's big creek, the "Mississloppi," striking it at a point where it seemed two miles wide, with an island in the center. It was a great relief for our cramped legs when we hit the ground in Oskaloosa, Iowa, several hours later. While walking down the "main stem," as Jim dubbed the leading street, we met a young hobo who suggested a "combination." Jim evidently knew what was meant, for he agreed at once for us both. When I found that a "combination" means begging from house to house, picking up a potatoe here and a turnip there as the foundation for a vegetable soup, I vetoed the plan. Later we went with the hobo half a mile out in the country, where we found no less than twenty "cinder

Willies" gathered around the festive tomatoe can.

Here to my great surprise I found the community soup to be tickling to my palate. It was the idealistic state, for here one man was as good as another and harmony was the key word. After the feast, tobacco pouches were passed around, and then started the yarn-swapping. Few were the cities that these travelers had not struck; they spoke of Dallas, Texas, and Portland, Maine, as if they were right across the alley from one another. Being a newcomer to the Grand and Ancient Order of Hoboes, I received much advice.

"Don't go through Kansas, kid," said one old duffer. "They'll give you eleven months and twenty-nine days on the rocks. You want to fight shy of the 'shacks' down East, too, for they're bad medicine. One of them slipped over a hook to my right lamp an' th' cop put over th' pinch."

One Chicago hobo told of having been in a wreck the day before. "I was lookin' out 'o me side-door Pullman," he said, "when I sees th' car next to th' tender start to do th' flop. I jumps, but I was too late. I was pinned to th' ground by a car o' shingles. I was bettin' three to one with meself, an' no takers, that I was shy two legs at least, but when they digs me out, yer uncle was only bruised and stove up a little as ye sees me now. There was thirteen cars left th' track, an' no one killed. Beleever me, kid, th' sight of a box car makes me dizzy. I've bummed thirty years on th' road, but I'm goin' home to Chi an' mother."

Naturally I took this yarn with a barrel of salt, but the next morning we passed this very wreck and I saw the thirteen cars as they lay piled along the track; so "Chicago Fat" had told me the truth. In my later dealings with these men I found that they adhered to the unwritten code of morals known only to trampdom. Some of them had what they called "monikers," or monograms, with which they decorated the places they visited. For instance, there is one famous "moniker" that can be seen all over the country,—an arrow with the characters, "A. MOVER," above it. The originator of the famous "A. No. 1," is now dead, but he has a successor who keeps it before the public eye.

Our good train carried us on past the fertile fields of Iowa. We were feeling in fine fettle. Everything had been clear sailing. The wheels were clicking along merrily, the cinders

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Because they reduce belt slippage, make even cylinder speed and give greatest traction. They are pliable in all climates and under all weather conditions, are thoroughly stretched, cured and pressed and have a row of stitches every $\frac{1}{8}$ inch across the width of the belt.

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150 ft.—7 inch—4 ply	\$105.50
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Klingtite belts will cost you as follows:

100 ft.—6 inch—4 ply	\$77.90
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Prices include barrels, half barrels and cans. Full barrels contain 50 gallons or more. Half barrels contain 28 gallons or more.

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This is a clean, dark, heavy-bodied oil, made from high grade Pennsylvania crude, and is particularly adapted for engines carrying high pressure—100 pounds or over. We guarantee satisfaction to the purchaser.

Barrels (50 gals. or more) each	\$22.50
Half barrels (28 gals. or more) each	14.40
10 gallons, jacketed cans, each	5.85

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Money Refunded if goods not as represented

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HURON RED ENGINE OIL—Light and Heavy

Is not stringy but an excellent lubricant, particularly in cold weather. Used by us in all of our factories for general lubrication. We guarantee satisfaction to the purchaser.

In ordering state whether light or heavy is wanted.

Barrels (50 gals. or more) each	\$19.80
Half barrels (28 gals. or more) each	12.60
10 gallons, jacketed cans, each	5.18

HURON HARD OIL

Warranted as suitable for highest speeds in thrasher, saw mill and other similar machinery in heaviest bearings, open boxes and compression cups. Will not gum or corrode, free from grit and made from purest lubricating oils. A high grade oil at a very reasonable price. We guarantee satisfaction.

NO. 3 MEDIUM HARD FOR GENERAL USE

In barrels and half barrels, per lb.	\$0.11-7/10
25 lb. pails, each	\$4.05
10 lb. cans, each	2.03

HURON AXLE GREASE

This is a good, clean, light colored grease, suitable for axles, gears, etc.—not for machinery journals. We guarantee satisfaction to the purchaser.

In barrels and half barrels, per lb.	\$0.07-2/10
100 lb. keg or four 25 lb. kits.	\$8.10
25 lb. wood kit, each	2.25
50 lb. keg or two 25 lb. kits.	4.28
10 lb. wood kit, each	1.13

SAWYER CYLINDER TOOTH WRENCH

Something new. Positive gear drive. The gears in this wrench are steel and machine cut. No ratchets to wear out.

This wrench will give more speed and leverage than the ordinary kind as it is very powerful and yet is easy to operate.

Price each \$7.65

Be sure to give size of nut to be used on and whether square or hex.

CLIPPER BELT LACERS—Every Thrasher Needs One

The "Clipper" Belt Lacer No. 3 is a 24-pound machine which can be carried to the belt and permits the lacing to be done without removing the belt from the shaft.

A belt 6 inches wide can be laced at one operation. If the belt is wider than six inches, the operation is repeated—if narrower, the standard card of hooks is cut to the proper length.

No. 3 Belt Lacer, each \$25.00

The "Baby Clipper" No. O—4 inch is a small lacer which can be used in connection with an ordinary vise. The hooks are inserted and held in place the same as with the No. 3 Lacer. As the jaws of the vise are brought together, the hooks are pressed into the squared belt end, and the lacing when completed is identical with that made with the No. 3 Lacer. No. O "Baby" Belt Lacer, each \$6.50

peppering us profusely, the telegraph poles slipping past in silent review, when a whiff of wind whipped Jim's hat from his head and sent it scooting across the prairie. At Geneva, a little town in northern Iowa, we hopped to the ground and started out to buy another "Kelly" for James.

"You fellers a-lookin' fer work?" shouted the elevator man.

"Sure, Mike," said Jim.

"Well, we've got it. There's a plenty of it fer any man with a strong back and a weak mind."

As we could qualify on both counts, we made a dicker with two farmers who were neighbors. An hour later we sat down to a white man's supper and Jim got outside of a meal which he afterwards confessed threw him "all out of shape."

The next morning we had our first experience wrestling oats. I went at it bare-handed, elated at the prospect of being a real harvest-hand. The farmer started out with the binder and I trailed along behind, slamming the bundles together in a catch-as-catch-can style. I felt like an old hand at the business and wondered just what he would say when he noticed what marvelous progress I had made. I soon found out.

"Hey there, bub, what ye doing with them shocks?"

"What's th' matter with them?"

"Hain't ye never shocked none?"

"Never a lick," I confessed as I ditched the sweat from my eyes.

He was a good fellow, so he showed me how to make a good shock that would withstand the attacks of wind and rain. When he paid me off he said, "There's work for you on this farm any time you want to come this way."

I'll never forget the first dinner we had. Jim had been borrowed from the next farm for the day. After we had washed up and slicked our hair, we were surprised to find two neighbor girls in the parlor. My first knowledge of their presence was when Jim came up to me, mad as a hornet. "Say," he blurted out, "what's the matter with me? There's two dames in the front room that keep neckin' an' gigglin' at me all th' time. D'y'e see anything wrong with me?" I assured him that his costume was in perfect form and plenty of it, but he was still a little wrathful.

We spent two enjoyable weeks here, receiving two dollars and fifty cents a day for the products of our brains and brawn. Then we heard of a tiling job on the next farm. It was the county farm. The pay was on a piece-work basis, with board and room. The foreman told us we could reach three dollars a day easily, without rushing ourselves, but we failed to reach this highwater mark. My memories of ditching for tile are very bitter. All we had to do was well expressed by a young Englishman who worked with us:—"Joost take your bloody spade in hand, whittle out 'alf of th' bloomin' state and you'll

bloody easy make enough to keep you in 'airpins." After following his advice a couple of weeks, we dug clear across into the state of Minnesota, with the Canadian boundary in sight. Even at that we were surprised to find that the result of our combined labor would hardly change a ten-dollar bill.

One sizzling hot day I said to Jim, "Let's split the breeze and go farther north." He was with me, so the same day found us again on the M. & St. L., though this time we rode the cushions as befitted men of capital. Our tickets read to Mason City, so we bunked there for the night. At seven o'clock the next morning we found our room was right over a piano factory, with a buzz-saw and a trip hammer in active operation. Then on we rode to Albert Lea, Minnesota, a town full of Swedes and Norwegians, with only one lone O'Brien.

Here we met a young fellow who said, "If you guys are lookin' fer work, you can git two an' a quarter a day on th' new packin' house they're puttin' up here."

"I'm your huckleberry," I answered. "Lead us to it," commanded Jim.

Here we made an intimate acquaintance with the hod—in fact, we continually rubbed shoulders with it. A week later I said to Jim, "I've heard of a man who is recruitin' a crew for a threshin' machine and as it pays two and a half a day straight, let's take it up."

Jim agreed, so we rode out of town the next day with two other young fellows to tackle the farm proposition again. We covered about thirty miles of bumps that day and finally came up to our new home. The boss led us over to the cook wagon and after furnishing each of us with a knife, fork and tin plate, he told us to go ahead and fill up. Here for the first time we had to sleep in the open, each man being furnished with a blanket. Although the work was hard, I never felt better in my life.

One of the features of the work was handling grain, as they called it. This consisted in juggling big sacks of wheat weighing about one hundred and twenty-five pounds. At first this was awkward work for me. I would walk round and round a sack, trying to find some place to grab hold. I had a deep admiration for the men who picked them up and tossed them on their shoulders as if they were sacks of feathers. I soon caught on to the knack of it and was able to hold my own.

Here it was that the Wanderlust in Jim's nature impelled him to strike off for British Columbia. I was sorry to see the old scout go. In two or three days I was promoted to pitching grain in the field. This consisted in helping load the racks in turn. Later on I was again changed to driving a team, which was the biggest snap of all. About this time it started into rain, and as I was losing nearly every other day, I decided to

quit. Most of these men were of a gambling disposition, poker being one of their favorite recreations. While it was raining, there was an almost continual poker game in progress. I took a hand now and then but managed to break about even.

It was on a Sunday noon that I caught a southbound freight that carried me through in good shape to Oskaloosa. I reached there early the following morning. Hardly had I struck the ground when I saw an east bound freight pulling out. I knew this train would carry me right through to central Illinois. "Me for you," I said as I swung lightly aboard.

About this time I began to feel the pangs of thirst and hunger. I hadn't had a bite to eat or a drop to drink since noon of the preceding day. I'd have given the world for just a little snack. The sun was blistering hot. I was in an open coal car with nothing to protect me from the fierce heat. About noon we were held over at a junction called Morning Sun.

Here began one of the most exciting adventures of my trip. A hobo came tumbling over the side of the car. He was without exception the toughest looking specimen of humanity I had ever seen. His make-up reminded me of a cross between a street-car wreck and a nightmare. His shoes were tied together with wire. Capillary attraction held his clothes in place. His face was a continual insult to a barber shop. He was a big, burly, broad-shouldered creature, with the brute predominating.

"Where ye bin, kid, out to th' harvest fields?" he grunted.

"Yep," I answered.

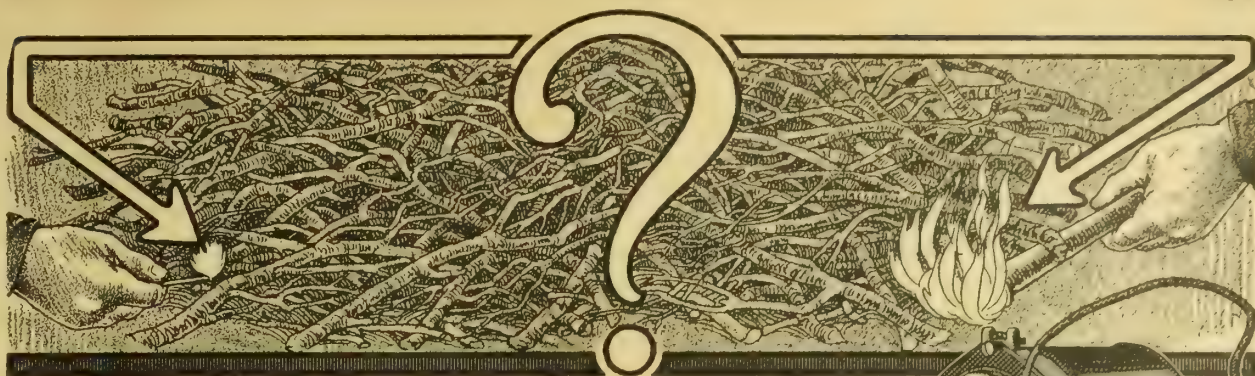
"I reckon ye're packin' a roll then."

"Nope, I hain't got a bean in my tick."

Now by this time I myself didn't look exactly like a walking fashion plate. I had a three days' growth of stubble on my chin, which with the grime that had accumulated on my face and neck, somewhat spoiled my natural beauty. I noticed the hobo edging my way along the side of the car, and for the first time it flashed into my head that he might try to man-handle me. I saw he had not believed me when I said I was broke.

Whirled around on him suddenly and it looked to me as if he was on the point of attacking me. When I turned, he drawled out, "What's the matter, kid? Are ye scared?"

"No, but you'd better beat it to the other end of the car, or you and I will go to the mat." I meant what I said. I felt strong as a young ox. My work in the harvest fields had put me into the pink of condition. The natural yellow in his make-up showed itself, for he backed up and took his corner. In this belligerent position we rode for the rest of the



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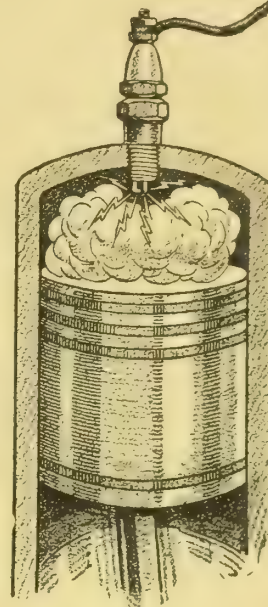
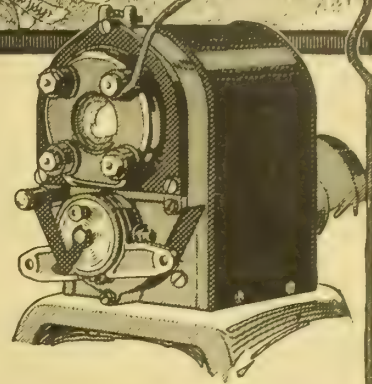
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day, he at one end of the car and I at the other, the hot sun beating down on both of us. It was certainly a trying experience as I was nearly dead from hunger and thirst, yet I was determined to ride on home if I could.

As we pulled into the outskirts of Monmouth that afternoon, I dropped off to wash up, leaving, as I thought, my undesirable companion to go on ahead. Judge of my surprise and anger when I saw him walking down the track, coming straight for me. I now saw red. Naturally I was a little alarmed, for there wasn't another person in sight. I decided I'd start things this time myself. I walked toward him and yelled, "Now, 'bo, if you feel lucky, put up your hands, for I'm coming right after you."

Although I think he had nerved himself up to the point of attacking me, yet when he saw me coming full

tilt at him, he backed away. He threw up his hands in front of his face and whined like a yellow cur. "What's th' matter, kid?! I jest wanted to walk to town with ye."

"Get out of my way I'm going alone, and I won't have you following. If you do, I'll crawl right down your throat!"

I was desperate, with just the proper amount of fear to make me dangerous. He sank down on the rail and there he sat, cooling his dirty heels. When I was well into town, I could look back and see him still sitting there, all his energy gone from him. Sez I to myself, "Goodbye, Jim, take keer of yerself."

I swooped down on a restaurant and ordered four pork chops and four fried eggs, with potatoes and trimmings. The waiter's pale-blue eyes popped out and he yelled, "For the

love of Heaven, kid, we keep open till twelve o'clock!"

When I'd finally licked the platter clean, the world once more felt round instead of flat. Half an hour later I swung onto a passenger train. I rode the blind baggage and reached home safely, being in much better shape both physically and financially than when I had left it for the harvest fields.

"You belong to the Society for Prevention of Cruelty to Animals, don't you?" asked the caller.

"Yes. I'm one of the officers," replied the man at home.

"Well, here's a song I dedicated to your Society. I'd like to sing it to you."

"All right. Wait until I put the cat out of the room."—*Yonkers Statesman.*



Prevent Smuts

It is more necessary today to employ scientific methods on the farm than ever before. Cleanse all seed grain with *Formaldehyde* solution before planting. Positively destroys smuts of wheat, oats, barley, rye, etc.

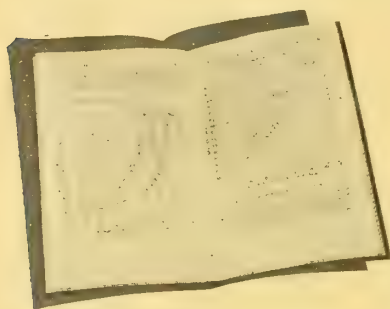
FORMALDEHYDE
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Spread the seed grain in a thin layer and sprinkle with diluted *Formaldehyde*. Shovel over thoroughly and cover the pile with bags for about ten hours. Dry out by spreading uncovered in a dry place. Disinfect the drill with *Formaldehyde* before planting.

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The 1920 fair dates
are given on page 24

The Old Thresherman Turns Artist

(Continued from page 7.)

A fellow can take the temper out of the daggoned knives pretty quick if he ain't careful. Yes, sir. Think the old girl looks pretty good in her paint. Folks won't know her when she begins to hum. Be like that fellow that used to haul water for Sam Stone. Sam said he yawned so durned much he met him with his mouth shut one day and didn't know him."

Suddenly the little gasoline engine that operated the emery wheel gave a dying gasp.

"Out of gas," announced the Old Thresherman. "Forgot to have the man put any in when the wagon was along yesterday. Have to drive to town now for some, I reckon. Well,

I might as well finish that there—what was that big word you called it when you first come?"

"Psychology?" I asked.

"Yep. Reckon I had better psychologize that there engine some. It might feel out of place running around with a separator that was all dolled up."

He picked up his paint bucket and brush and I looked back as I headed the flivver toward home. The Old Thresherman was turning the dingy tool boxes on his engine into things of beauty and joys forever and his brush marked time to the music he made,

"Tee dum dee dum tee diddle dee dum—." It wasn't a beautiful song but it was certainly earnest enough.

Canadian Government-Owned Elevators

(Continued from page 10.)

flax separators, one Monitor screenings separator, and one Richardson wheat and oat separator.

The storage annex consists of one hundred and fifty bins, having a capacity of 3,000,000 bushels. The drying plant, having a capacity of 24,000 bushels of damp grain per day, is installed in a separate building adjacent to the elevator.

All machinery in these elevators is electrically driven, the power for the Saskatoon plant being purchased from the city, while at Moosejaw the power is furnished by a Diesel oil engine plant operated in conjunction with the elevator.

Each elevator is built on a site containing approximately fifty acres of land, and is served by three receiving and two shipping tracks. At Calgary the elevator is served by three transcontinental railways, having a total capacity of 2,500,000 bushels. This plant cost \$1,000,000.

These interior elevators are entirely different from the country elevators, the difference lying not merely in their limited number and much larger capacity but also, and more particularly, in the functions they are intended to serve and their general economical character. They are provided with all inspection facilities by the Inspection Department, and with all weighing facilities by the Weighing Department. Official inspection and weighing facilities are thus brought near to the producer.

These elevators are also fundamentally different from the terminal elevators located at the head of the Great Lakes or at ocean ports. These differences are evident from a statement of the purposes which the interior terminal elevators are intended to serve. These purposes are summed up as follows by R. Hetherington, secretary, Board of Grain Commissioners of Canada:

1. To provide facilities for meeting emergencies which experience has shown frequently occur affecting the grain trade of Western Canada. There have been from time to time congestions due to shortage in storage and shortage in cars, and there have also been seasons when, owing to the lack of drying and other hospital facilities in the grain field, there has been very serious loss incurred by the producers of grain.

The interior terminal elevators were intended, in the first instance, to provide for such emergencies. In this respect they are insurance houses, radically differing in character from terminals at lake or ocean ports.

2. To provide a certain amount of surplus storage as near to the point of production as possible.

3. To provide a certain amount of cheap storage for local mills throughout the West, thereby stimulating the milling industries of the Prairie Provinces.

4. To provide means whereby the agriculturalists of the West might have an opportunity of retaining some of the by-products of the grain in the West, thereby supplying one of the conditions necessary for the adequate development of mixed farming.

5. To give the agriculturalists an opportunity to take full advantage of all available markets, whether West, South or East, as the demand might arise.

The third class of elevator operated by the Canadian government is the Transfer elevator, located at Vancouver, B. C., which was erected in 1916 at a cost of \$800,000. This elevator is also equipped with the most modern machinery for the economic and efficient handling of grain, including sacking machinery. The object of this elevator was to establish a connecting link at the western coast, and in order to demonstrate the feasibility of shipping grain by the Panama Canal route to Europe, as well as facilitate grain trade with the Orient, it being intended that the elevator should operate for those purposes in conjunction with the interior elevators.

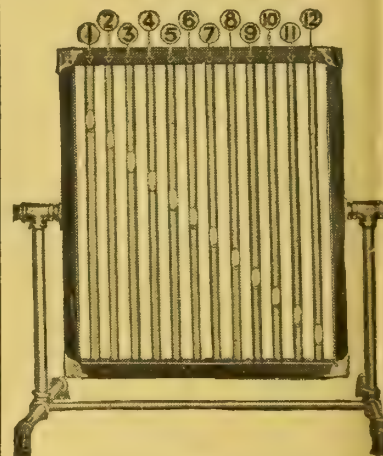
It will be noted that, held under public elevator facilities, is at all times during the critical periods of market, sufficient amounts of surplus grains in storage to preclude the possibilities of "bulls" entering the farmer's grain market and wrecking its prices for selfish interests.

If You Are In Doubt

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Send for our chart and instruction book—it's free—or write to us for our recommendation for your particular motor.

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P. S. Send for FREE one-pound sample of our **BALCYLENE HARD OIL**. A Cup Grease made from Pennsylvania Steam Cylinder Oil. Nothing like it. Outwears all others. The Grease you have been looking for.

Mention The American Thresherman and Farm Power

Real Trucks on Real Farms

(Continued from page 9.)

Let us issue a warning: don't buy a truck on the hope of selling it for more than its cost. Minster is a man with much mechanical ability, and he is by nature careful of his truck in its operation and housing. His big truck has been a benefit to his entire section; one reason for this, however, was the rush transportation problem created by a cyclone, just as spring work opened at top speed. Obviously, not all farmers will find their conditions similar to those of Minster.

Other farmers have found this same size, two and one-half ton, admirable for their needs. One of them is S. L. Schiesser of Maple Hill, Kansas.

Mr. Schiesser lives in a state well-known for its cyclones. He has escaped the misfortune of Minster of Indiana. Three years ago he saw two tornadoes pass by him in rapid succession, yet his place was untouched. Even at that time he owned a small truck and was able to assist his less fortunate neighbors.

Schiesser has tried four sizes of trucks. Each change he made was for the purpose of getting a larger truck. He has kept a good record of his original cost, deterioration, mileage costs and income from hauling. He figures he makes two dollars more per load, all factors considered, than he did with any other size.

Most of Mr. Schiesser's hauling is to Topeka. He has a haul of over twenty miles. Often he is compelled to make the return trip with no load; sometimes he hauls Kaw River sand for building work or roads. As in his section all soil is clay, sand is much in demand. When the writer met him, he had just unloaded sixty-five hundred pounds of baled hay and was pulling for the sand company's yard, to get a load for his return trip.

During the Kansas threshing season, Schiesser's son handles an outfit and does custom threshing. At the same time, Schiesser does custom hauling. He can bring over one hundred bushels of wheat from the field to Topeka in less time than the farmer's team can take half that amount to the railroad. In his vicinity, two other farmers are using trucks of similar size and make for the same purpose. There has been ample business for all three men.

The Indiana farmer finds that hauling livestock to Fort Wayne and building material on the return trip keeps a big truck busy.

The Kansas farmer has learned that wheat and hay can be carried with profit to Topeka, and he finds demand for many return loads of sand.

During the past week we have visited three Wisconsin farms whose owners use trucks for a combination

of sheep raising and tobacco growing. When a man feeds Western sheep to the number of fifty-five hundred, he must raise lots of feed and buy all he can get. If he raises tobacco, he is almost compelled, under the present farm labor situation, to have it grown on a share basis. As owner, he must have the means of marketing it quickly when the tobacco buyer demands delivery. These Wisconsin men have found that large trucks are kept busy both ways, carrying tobacco and wool to town, returning with feed. Often this feed is scorched or burned grain, without value for most purposes but fine to combine with pea-vine or corn silage.

The large truck has a place on the farm, but not on every farm. Many small farmers will never find a one-ton truck profitable. Their ordinary

transportation problems can be solved by the smallest and cheapest of cars. If their haul is short, horses may always fill the bill for them.

The man buying a large truck should study his hauling problem carefully. He should survey his field of custom hauling. If he has no inclination to do hauling for others, it is foolish to buy a truck larger than his normal hauling demands. If he has a rush hauling problem, he will find a truck whose owner can accommodate him. Surely it is better to pay a custom hauler a small profit, several times a year, than to buy a three thousand dollar article where an eight hundred dollar article will suffice.

Maybe you are a fair mechanic, a hard worker and a good business-getter. If no neighboring farmer has

established a custom hauling business, as a side-line to farming, there may be a profitable field open to you. Aside from profits, you will be protected against a ton-mile shortage on your own farm. The large truck farm field is worth much study.

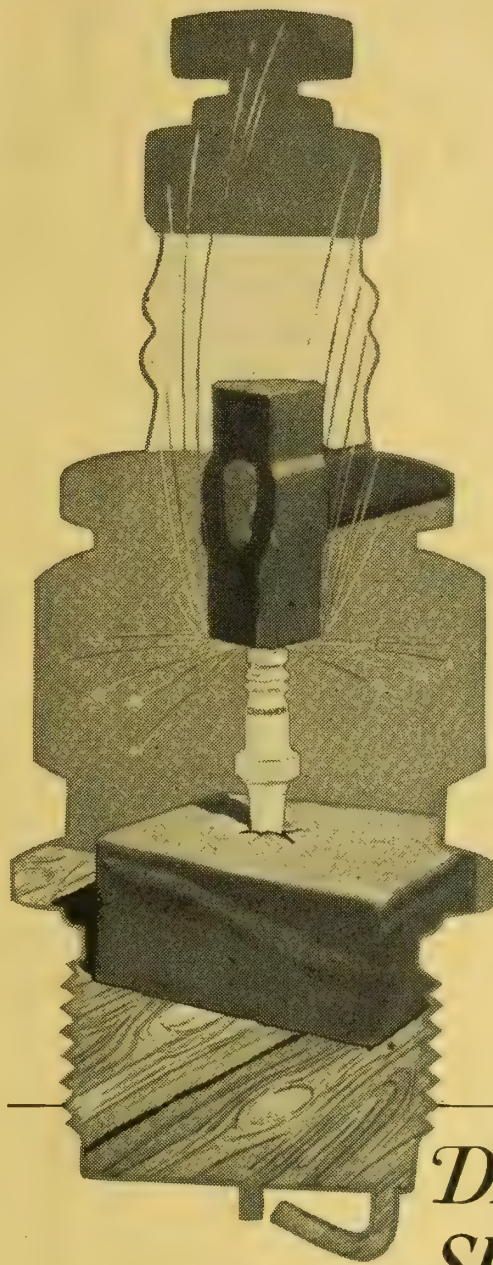
Bedton was always complaining of his wife's memory.

"She can never remember anything," said he. "It's awful!"

"My wife was just as bad," said Clinker, "till I found a capital recipe."

"What was it?" asked Bedton eagerly.

"Why," said Clinker, "whenever there's anything particular I want the missus to remember, I write it on a slip of paper and gum it on the looking-glass."—*London Answers.*



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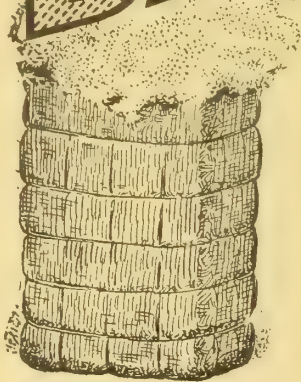
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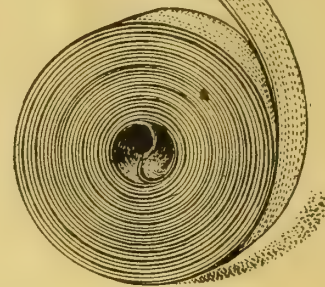
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Mention The American Thresherman and Farm Power

The Business of Wheat Growing

(Continued from page 8.)

year. Not at all. But where the rainfall is so light that there is not enough moisture for a crop every season, it will pay to summer-fallow, and sow the wheat every other year.

Fertilizers for wheat must receive much more attention in the future, especially in the humid sections. In these sections the establishing of a good rotation on most fields is fairly easy—and farther west soil moisture will be the limiting thing in crop yields for a long time anyway. A big thing in any wheat farm rotation is to have a legume such as alfalfa, clover, or cowpeas. Save every pound of barnyard manure, and get it on the soil before it has had time to leach or to lose its value through heating.

Phosphorus is perhaps the element of most importance in growing wheat; it is removed in the crop to a considerable extent. It is being applied commonly as bone meal, or as raw rock phosphate or acid phosphate. There are but few soils that need large amounts of potash, but some do. An excessive amount of available nitrogen in the land has a bad effect on wheat, if it is enough to make the wheat lodge, or fall down. This lodging is caused by the forcing of a too rapid growth of the stem, which increases in length so fast that

it is not able to support itself. When one has land of this kind, it is best to plant it to a crop like corn, which is not injured by a large amount of available nitrogen in the soil.

No matter how well the soil is prepared or how carefully fertilizers are applied, the best returns will not be obtained unless high yielding seed is used. Unfortunately, the seed wheat on many farms is not so high class as it should be. Much of the grain is mixed badly with foreign varieties, with rye, and with weed seeds.

One of the fruitful sources of the mixing in winter wheats is in the threshing machines. One ought always to be certain that the separator is free of foreign seed before any grain is saved for planting. One of the best ways to be certain of this is to thresh some such crop as oats before wheat. This will clean the machine of foreign seed. If this is not done, one ought not to save any grain for seed until at least one hundred bushels of wheat have been threshed.

The best time to sow wheat is a rather complicated problem, and it depends on a number of factors, the most important ones being the climatic conditions and the Hessian fly. The preparation of the soil has something to do with it also. The advantage of early sowing is that the wheat makes a stronger fall growth, covers the ground better and is not

so likely to winter-kill as later sown wheat. Early sown wheat also furnishes more pasture than that which is planted later, and this often is important. When the Hessian fly prevails, late seeding has the advantage of early sowing, since the fly does not work on the later sown wheat. At the Kansas station it has been found that the fly does not do much damage on wheat sown after September 25, and most of the wheat on the station farm is planted soon after this time.

Wheat frequently is not sown thick enough for the best results. The proper amount to sow generally will range from two to six pecks to the acre. Just the amount varies with the locality, variety, method of seedbed preparation and the year. As a rule, less seed should be sown on light soils and in dry climates than on more fertile soils or in regions of more abundant rainfall. An extremely fertile soil may require thick seeding to reduce the growth of straw and prevent the grain from lodging. In a well-prepared seedbed, plentifully supplied with moisture, less seed is required to produce a good stand of grain than when sown under less favorable conditions. As a rule, less seed is required for early seeding than for late seeding, since the early sown wheat often starts more uniformly and has a better chance to stool than the late sown.

The proper depth to sow wheat will vary some with the season and the condition of the seedbed, but it usually will range from two to two and one-half inches. It usually is important that a farming mill be used to clean the seed so the poor kernels can be eliminated.

Have Maize for Export

A cablegram from Consul General Robertson, of Buenos Aires, May 28, discusses the maize crop in Argentina as follows:

"The present exportable surplus of maize is abnormally large, being officially estimated as nearly 6,000,000 metric tons on May 14, representing old stock and also the new harvest, which is just commencing despite the fact that 1,500,000 metric tons have already been exported during the first five months of the present year, almost entirely to Europe. Nevertheless, there is an active demand for maize, which is selling around one hundred and ten paper pesos per metric ton, as against sixty-three pesos last January and fifty-seven pesos at the highest price in the year 1919. Although some holders are willing to sign others are holding out for still higher prices; this has been more noticeable since a rumor for the past few weeks that the German Agricultural League has contracted for 1,000,000 tons and that France will also be a large buyer. Unless there is rampant speculation, it is hardly probable that prices will exceed the recent record figures here of one hundred and twenty pesos per ton."

"Tommy," said the teacher, "can you tell me the meaning of 'repentant'?"

"Yes, ma'am," answered Tommy, "It's how a fellow feels when he gets caught."—*Stray Stories.*

Parson Dickson's Sermon

IN de closin' chaptah ob Matthew yo' will find dese wuhds: "An' behold dah was a great uthquake, foh de angel ob de Lawd descended from heaben an' came an' rolled back de stone from de doah an' sat upon it."

De life ob Jesus had been brought to a close upon de cross ob Calvahry. De priests had done had dah wish an' Pilate had condemned a just man to death to appease de rabble. De next day aftah de crucifixion de chief priests an' Pharisees came to Pilate an' tole him how de Lawd said dat aftah three days He would rise agian, so dey wanted de sepulchah made safe foh three days lest His disciples should come by night an' steal de body away an' den claim dat He had risen from de daid. In ansah to dis request Pilate said: "Ye hab a watch; go youh way, make it as suah as yo' can." Den comes de wuhds ob de text, givin' de facts dat followed.

Bein' a crafty crowd demselbes, an' bein' willin' to resoht to any means to cahry dah point, de chief priests an' de Pharisees were done afraid dat de disciples ob Christ would do de same thing. Dis was de test dat dese same chief priests, who had been guilty ob habin' a just man cruce'fied, wanted made sutain an' suah, so dat dah couldn't be any trickahry in de mattah. Yet aftah all de precautions had been taken an' when de Angel ob de Lawd had come an' rolled de stone away from de doah ob de sepulchah an' sat upon it, an' when Mary Magdalene an' de oder Mary had gone fo'th in de uhly dawn to de tomb ob Jesus an' found it empty, an' when dese good women had tuhned back to tell de disciples an' as dey ran Jesus Himself appeahed unto dem an' said, "Go tell mah breddern dat dey go into Galilee an' dah dey shall see me," still wid all dese facts befoah dem an' wid dis same watch dat dey demselbes had set befoah de doah ob de sepulchah repohtin' all dat had taken place an' showin' de priests de proof, St. Matthew says dat dey hiahed de soljahs wid "lahge money" to say dat His disciples came by night "an' stole Him away while we slept."

Now if yo' will done follow de footsteps ob Jesus an' His disciples from de selectin' ob de Twelbe until de day ob de crucifixion, yo' will find dat, outside ob de one case, dat ob Judas Iscariot, not one ob de Twelbe eber tried to do a mean an' undahhand trick or denied a truf, 'ceptin' when Petah said he didn't know de man. If de disciples had planned on any deception or undahhand acts, as de chief priest had done, dey could hab rescued de Lawd from de hands ob de rabble long befoh He was executed. Eben Jesus Himself tole dem in de Gahden ob Gethsamene dat if He would pray to His Fathah dat He would send Him twelbe legion ob angels an' dis was when de Lawd, seein' Petah smite off an eah ob de suhvant ob de high priest, stretched fo'th His hand an' healed him.

When men set about accomplishin' a thing, if dey am crooked or unscrupulous dey will go to any end to cahry dah point an' den add insult to injuhry by lyin' an' hiahirin' oders to lie foh dem. Dis seems to hab been de stock in trade ob de high priest an' his crowd in dealin' wid a man who had fed de hungry, clothed de naked an' bound up de wounds ob de afflicted; who had done cured thousands ob sick an' made de blind to see an' de lame to walk; who was guilty ob nothin' moah dan disagreein' wid a crowd ob selfish an' self constituted spokesmen ob Jehovah, men who were willin' to rent out de temple ob dah chu'ch, if yo' please, foh de use ob a mahket place.

Dis kind ob precepts an' example hab been set befoh de people since de wuhld began, in religion, in politics an' in all things. Men am not real bad at haht an' if de teachin's ob de Lawd had been carried out, or was to be cahried out from dis time fohwahd, it wouldn't take bery long to bring about a wondahful revival ob righteousness an' ob honesty an' ob squah dealin' in all things. But de trouble am dat dis wuhld has been growin' moah selfish, when it should habe been growin' moah righteous, since de Son ob Man taught de beautiful lessons from de Suhmon on de Mount to de end ob His ministry. We am all responsible foh dese conditions to a sutain extent, foh we am not eben honest in all things wid ouhselbes. If we would tuhn from wrong an' help build foh righteousness it wouldn't take long. But, oh, how much we need strong men in eberv walk ob life who will probe true an' tried all de way an' in no oder callin' moah dan in de priesthood, an' dat means 'mong eberv chu'ch an' creed in all de wuhld.

Let us hope an' pray foh de time to speedily come when de Angel ob de Lawd will roll de stones ob wickedness an' wrong from de doahs ob ouh hahts an' when de Lawd ob righteousness may dwell wid us foheber moah.

Let de choir lead in singin',

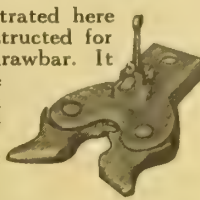
"Oh, foh a closah walk wid God,
A calm an' heabenly frame,
A light to shine upon de road
Dat leads me to de Lamb,"

an' we will be dismissed.

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Buller Automatic Coupler

The style illustrated here is especially constructed for engines with flat drawbar. It is made for three sizes of bars, 3/4x2 1/2, 3/4x3 and 1x4 inches.



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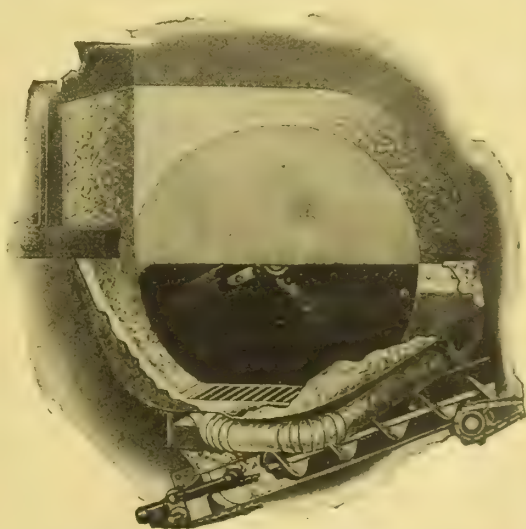
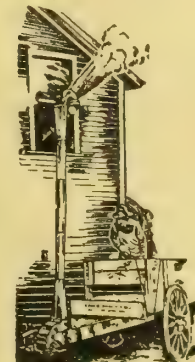
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Learn Gas Traction Engineering while you are working and earning money. We'll teach you by mail. Send for catalog. Address

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For Sale and Want Department

In these columns any person may advertise for sale or trade anything which he desires to sell, purchase or exchange.

ANNOUNCING A NEW CLASSIFIED ADVERTISING RATE

Commencing with the September, 1920, number, the rate on Classified Ads will be ten cents a word.

During the past few months the problems of the publisher have multiplied at an alarming rate. Expenses have increased by leaps and bounds. Paper, the raw material of the publishing industry, has increased in cost until today it is almost four times as high as it was in 1914, and with still higher prices in view. Printing, the big labor item in the publishing business, art work, engravings, editorial contributions, office expenses and salaries, in short, everything that enters into the production of this magazine has very greatly increased in cost the past few months and with no assurance of a more stable condition in the immediate future.

HELP WANTED

WANTED—Experienced separator man; references required. Must be competent. P. O. Box 341, Malad, Idaho.

WANTED—Capable man to lease large Rumely rig in Canada. Curtis Baldwin, 1700-17th St., Denver, Colorado.

WANTED—Six men that can take charge and operate threshing machinery. State experience and wages wanted in first letter. W. E. Miller, Assumption, Ill.

WANTED—Salesman and district manager this territory. Call on dealers with tires and accessories priced so low they sell on sight. Master Production Corp., South Bend, Ind.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

SALESMEN WANTED—Lubricating oil grease, paint, specialties. Samples free. Whole or part time. Commission basis. Men with car or rig. Write for the attractive terms. River side Refining Co., Cleveland, Ohio.

POSITION WANTED

WANTED—Position as engineer for coming season. Five years' experience threshing, sawing, breaking, etc. State wages and all particulars in reply. C. R. Nutting, Warrens, Wis.

POSITION WANTED by competent man as separator man, with some reliable machine owner, for twenty-five or more days. A. Hatton, West Union, Minn.

EXPERIENCED SEPARATOR MAN open for position in central states or north. Would buy part interest in good outfit with responsible parties or work for wages or on commission. Advise fully. O. W. Barlow, Grandfield, Okla.

WANTED—Position as engineer or separator man by man with ten years' experience; want long job anywhere with reliable man; prefer engine, steam or gas. J. Holmquist, 400 E. South St., Yates Center, Kans.

WANTED—By reliable and responsible man—a good threshing run to start about August 15 or later; eighteen years' experience, giving good satisfaction. Have a 32x52 Minneapolis separator, nearly new, and a Reeves simple steam engine. Everything in first-class shape. Will take threshing run away from here if a good one. Will inspect run and sign agreement to ship machine so that I can be depended upon. Write without delay. Can furnish best of references. Farmer to furnish crew and board. C. H. Woodruff, R. 2, Barry, Ill.

FOR SALE

FOR SALE—Four threshing rigs. Cheap. Will Sheridan, Sutton, Nebr.

FOR SALE—Advance twelve-roll husker. Bargain. F. L. Denise, Sidney, Ohio.

FOR SALE—Cylinder or concave teeth, 225, for Gaar-Scott machine. Crabb Gas Engine Co., Independence, Ia.

FOR SALE—20-40 Rumely OilPull, never been used. P. E. Sheldon, Thompson, Mo.

FOR SALE—36-inch Case steel feeder, high wagon loader, ready to run. Ellis Usher, Ionia, Ia.

FOR SALE—Avery 36-inch feeder in good condition. R. H. Lukes, Protivin, Ia.

FOR SALE—16-H. P. return flue steam engine No. 3245 for \$200. Wm. Fettes, Sibley, Ia.

FOR SALE—Ten complete threshing outfits, four and eight tractor plow. Jas. Conley, Jr., Sheffield, Ill.

FOR SALE—One 32-inch steel Garden City feeder, good as new. John Skinner, Gowen, Mich.

FOR SALE—Two J. I. Case separators; one 28x50 steel frame and one 24x42 wood frame. R. Morningstar, Drain, Ore.

FOR SALE—Case 28" separator, in good shape, \$675, including good drive belt. Geo. Wangsvick, Mott, N. Dak.

FOR SALE OR TRADE—16-Advance, 22-Gaar-Scott, 18-Gaar-Scott, 25-Rumely. Wm. Vandred, Mendota, Ill.

FOR SALE—Four Cushman engines at last year's prices. E. D. Richardson, Cawker City, Kans.

FOR SALE—12-25 Waterloo Boy tractor; latest model; never used. Buckingham & Brubaker, Prairie City, Iowa.

FOR SALE—One Port Huron Rusher sawmill. Geo. Barton, R. 5, Ludington, Mich.

FOR SALE—One 2A Western portable sheller, drags and all complete; in good shape. A. H. Weaver, Kinross, Iowa.

FOR SALE—One Heider tractor with automatic lift, three-bottom plow, in A-1 condition. J. H. Klesath, Dana, Ill.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—One Russell and one Case threshing outfit, complete, and clover huller. Henry Reesman, Burlington, Wis.

FOR SALE—18-H. P. Port Huron steam engine, fine shape, ready to run. Bargain. J. S. McCallum, Goldfield, Ia.

FOR SALE—Minneapolis 36x62 thresher, in good condition. S. E. Gullikson, Kimball, So. Dak.

FOR SALE—New Case 15-27 tractor and plows, at a sacrifice. Write Box 78, Knapp, Wis.

FOR SALE—24-inch Belle City separator fully equipped with self feeder and wind stacker. 20-H. P. portable Milwaukee Lauson engine, in excellent condition. R. A. Lueder, Plymouth, Wis.

FOR SALE—One 14-28 four-cylinder Avery tractor with three-bottom plow. Price \$1600. This tractor has plowed seventy acres and no belt work. Fiedler Bros. & Co., Thomasboro, Ill.

FOR SALE—Avery 5-14 self-lift plow, \$250; one furrow wheel for Avery tractor, \$15; one 54-inch Case geared wind stacker, \$75. Arthur Rissman, Enterprise, Kans.

FOR SALE—Three-bottom Independent beam Avery plow with stubble and breaker bottoms; in good condition. Price \$100. Clarence Tribitt, Altamont, S. Dak.

FOR SALE—25-H. P. I. H. C. tractor cylinder, complete with piston, rings, pin and bushings, ten-inch bore. Crabb Gas Engine Co., Independence, Ia.

FOR SALE—Birdsell No. 9 clover huller, practically new. Cheap for cash. Edw. Ziepfel, 309 N. Shuler Ave., Hamilton, Ohio.

FOR SALE—No. 1 Birdsell huller in No. 1 condition. Price \$500. For full description address F. J. Bennett, Freeman, Mo.

FOR SALE—One 20-H. P. Case outfit complete. Lot of silo filler and distribution pipe. F. E. Peterson, Kewanee, Ill.

FOR SALE OR TRADE—15-30 Bates Steel Mule, one extra separator, all ready to run. Terms to suit. W. E. Miller, Assumption, Ill.

FOR SALE OR TRADE—One 2A Western sheller with 36-foot drag, in good condition. Also one Caswell belt guide. Harry F. Pick, Chenoa, Ill.

FOR SALE—Southwest Universal bean thresher with self feeder, in good running order. Wm. F. Martin, R. 1, Box 8, Genoa, Colo.

FOR SALE—32x52 steel Case separator with feeder, weigher, wind stacker and belts; ready to run. Frank W. Sittler, Hoopole, Ill.

FOR SALE—Steam engines, tubes, expanders, cutters, funnels, belts, pumps, fire protectors, farms. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—Sawyer 150-foot, eight-inch four-ply canvas belt, never used, \$112. Morris beading tool, two-inch, used once, \$22. Wm. Kauffman, Perry, Ia.

FOR SALE—Five-bottom Oliver tractor plow, independent beam, \$200 f. o. b. Madison. Home Acre Farm, Madison, Wis.

FOR SALE—Two-ton differential chain hoist. Very useful in tractor repair work. Price, \$25. Crabb Gas Engine Co., Independence Ia.

FOR SALE—Nearly new grates, 42-28; one Practical oil pump; one throttle, two-inch, nearly new. Walter Rankin, Templeton, Wis.

FOR SALE OR TRADE—Steam threshing and plowing outfit, in good shape. Will sell or trade for 20-40 Case tractor. Robt. Butler, Mandan, N. Dak.

FOR SALE—Big Four Emerson tractor, 30-60 H. P., used about a year; in fine condition. New drive belt. Low price. T. B. Leary, R. 2, Greenfield, Ind.

FOR SALE—One 36-inch Minneapolis feeder, Peoria weigher, one fifteen-barrel steel water tank. All at a bargain. A. H. Koch, De Soto, Ia.

FOR SALE—Case eight-bottom tractor plow, in A-1 condition; or will trade for small tractor. F. C. Ehlers, Cleghorn, Iowa.

FOR SALE—30-60 Rumely OilPull, rebuilt and painted; good as new; guaranteed. Price \$3000. Jules Gravelot, Chebanse, Ill.

FOR SALE—One 40" Universal self feeder; has been run twelve days; at a bargain. Rutland Garage & Repair Co., Rutland, N. D.

FOR SALE—28x46 Avery separator with extension feeder; new 1919. Everything in first-class condition. Earl Landis, Holyoke, Colo.

FOR SALE—25-H. P. Buffalo Pitts traction engine, in first-class condition. \$750. M. Talcott, Georgetown, Penn.

FOR SALE—At a bargain. Avery separator, 42x70, No. 1 condition. Twenty-three boiler flues, three-inch diameter, 101 inch long. John De Boer, Grundy Center, Ia.

FOR SALE CHEAP—One Model L Schebler carburetor, 2½" size. New, used only a few hours on experimental work. Crabb Gas Engine Co., Independence, Ia.

FOR SALE—One new Avery 8-16 tractor; one new motor boat reverse gear; one two-cylinder motor. A. M. Laupp, Centaur Station, Mo.

FOR SALE—One 12-24 Waterloo Boy tractor, completely rebuilt, with three-bottom Grand Detour plow. Runs like new. \$800 cash. Box 155, Powell, Wyo.

FOR SALE—Westinghouse separator 36x54; Frick tank, Silberzahn ensilage cutter No. 18. Cheap if taken at once. Duke Parker, Dalton, N. Y.

FOR SALE—20-H. P. double steam engine, first-class working order. A good general purpose engine. C. M. Fetter, Salemville, Pa.

FOR SALE—Fordson tractor, Oliver plow and Monmouth seven-foot double disc. Outfit purchased new last fall. Gerald D. Kruse, Hale, Iowa.

FOR SALE—Two Aultman & Taylor beaners with self feeders and carriers, practically new. P. J. Peters, 743 Bond Ave., Grand Rapids, Mich.

FOR SALE—One pair of extension rims for Case engine, size 8"x5". Also Carpenter wing feeder for Case 36" separator. G. M. Johnson, Radcliffe, Iowa.

FOR SALE OR TRADE—One six-bottom 14-inch Avery self lift plow. One 12-ft. Russell Mogul road grader. O. F. Wilson, Pocahontas, Ia.

FOR SALE—Set of gears for 22-H. P. undermounted Avery engine, good as new, at half price. Box 465, Bloomington, Ill.

FOR SALE—50-H. P. Case steam engine. 32x54 Case separator with 150-foot, eight-inch belt, twelve-barrel tank. Chas. H. Petersen, R. 1, Libertyville, Ill.

FOR SALE—25-H. P. Nichols & Shepard steam engine; 40x60 Nichols & Shepard separator. In good shape. Julius Johnson, Walnut Grove, Minn.

FOR SALE—One Russell 18-H. P. steam engine; one Case 36x58 separator, cheap at \$1,500, good running shape. Edgar A. Wolf, Morristown, Minn.

FOR SALE—16-H. P. Gaar-Scott steam engine, 31x49 Gaar-Scott separator; in good condition. For immediate sale, \$1,250. S. E. Hutton, R. 1, Cameron, Mo.

FOR SALE—30-H. P. Buffalo Pitts engine and 38x62 Pitts separator in good shape, fully equipped. Ericson Bros. & Lerud, Sacred Heart, Minn.

FOR SALE—One 8-H. P. Cushman engine, in good running order, with attachments, to use on a hay press. Edward Hartman, Valley Center, Kans.

FOR SALE—Case plow; six fourteen-inch bottoms, power automatic lift. Plowed two hundred acres. Good as new. \$400 if taken at once. Wm. Witte, Jr., R. 4, Nebraska City, Nebr.

FOR SALE OR TRADE—For donkey engine. 20-H. P. Case engine, eleven years old; 36x58 Steel separator, seven years old. This machine is in good condition. J. L. Buckmaster, Hillman, Minn.

FOR SALE OR TRADE—Either 18- or 22-H. P. return flue Minneapolis steam engine, fully equipped and in first-class shape. Price very low. Frank Vsetecka, R. 3, Ft. Atkinson, Ia.

FOR SALE—One size No. 9 Birdsell clover huller, self feeder with all belts, six-inch wood trucks. Almost as good as new, used very little. Will sell for cash. Address Tieteman Bros., La Crosse, Ind.

FOR SALE—Case outfit consisting of 15-H. P. engine with contracto fuel bunker, 32x54 steel separator, ten-roll shredder and International ensilage cutter \$1,500. F. P. Austgen, R. 1, Dyer, Ind.

FOR SALE—Birdsell clover huller No. 1 with self feeder and blower. Good condition. Write for further information. Jacob Raab, R. H2-270, Indianapolis, Ind.

FOR SALE—Four ten-ton flexible cross-reach engine wagons; can be equipped for grain, gravel and tile; in good condition. Can be seen at Lake Park, Ia. Owner, Emmons Cannon, Ventura, Ia.

FOR SALE—24x46 Wood separator, run part of one season; 12-20 Heider, run one season; ready to go to work. Priced to sell. Montz Bros., R. 3, Cameron, Mo.

FOR SALE—40x60 Nichols & Shepard separator, Garden City wing feeder, rebuilt, repainted. 35-70 tractor. Sell separately. Box 582, Fulda, Minn.

FOR SALE—Five-plow Avery outfit, complete and in very good condition. Plow, \$300; tractor, \$1,000. E. R. Vehrs, Nekoosa, Wis.

FOR SALE—18-H. P. Minneapolis engine; 44x62 Minneapolis separator, in good condition. Cheap. Geo. E. Timberlake, Woodhull, Ill.

FOR SALE—30-60 Hart-Parr, 40x62 Case, 40-80 Avery, 40x60 Wood Bros. Both rigs complete and in A-1 shape, ready to work. J. E. Sykora, Windom, Minn.

FOR SALE—Two Aultman-Taylor tractors (25-50 and 30-60). Clover huller No. 5. Baker and Rumely separators. Sandwich No. 7 sheller. Reasonable price. John Harding, Gaines, Mich.

FOR SALE—16x20 Owens bean and pea huller; in good running order. Machine is two years old and has been protected from the weather. H. F. Olds, Titonka, Iowa.

FOR SALE—Hart-Parr 20-40 tractor, \$1200; ten-disc Emerson plow, \$275. Both in good running condition. Ship f. o. b. Lawrence. O. G. Markley, Lawrence, Kans.

FOR SALE—Minneapolis 20-H. P. straight flue engine with heavy plow gears. In good running order. For further information write R. M. Frank, Belle Plaine, Minn.

FOR SALE—Pitts 18-H. P. double Pitts, 16-H. P. single, traction engines. 25-H. P. International tractor, heavy type. Some secondhand threshers. Harry P. Kellogg, Nunda, N. Y.

FOR SALE—Minneapolis separator, fully equipped; used three seasons; practically as good as new. Price \$600. 20-H. P. rebuilt traction engine, \$800. Box 465, Bloomington, Ill.

FOR SALE—One 20-H. P. Baker engine; one 36x62 Baker separator; rig complete. One 18-H. P. Russell engine. Price is right. J. A. Cooper, 234 and 236 West Maryland St., Indianapolis, Ind.

FOR SALE—One 20" New Racine separator with wind stacker, complete; used one season. Are buying a larger machine of same make. Leechburg Hardware Co., Leechburg, Penn.

FOR SALE—160 acre farm on Illinois river bottom; six-room house, ten-horse barn, granary, corn crib, ice house and tool sheds. If interested write John Raisor, Meredosia, Ill.

FOR SALE AT JOBBERS' PRICES—New 20-H. P. traction engine, 36-32 and 24" separators. Write for particulars. Diets Machinery House, Bloomington, Ill.

FOR SALE—One 20-35 Flour City tractor, also one four-bottom P&O plow, 1919 outfit. Will sell separately. Address Ed Olson, Box 33, Brewster, Minn.

FOR SALE—North Star Rock drill and Jetter, No. 2, 500 ft. hole, manufactured by R. R. Howell & Co. In good shape and complete. L. W. Converse Land Co., Janesville, Minnesota.

FOR SALE—Case 65-H. P. steam, 36x58 separator, Garden City feeder, water tank, new drive belt; run four years; A-1 shape. A bargain. Box 78, Knapp, Wis.

FOR SALE—One Aultman-Taylor 30-60 tractor, one 30-60 Avery separator, White Wings feeder; good shape and in good running order. J. P. Ewert, Hillsboro, Kans.

FOR SALE—One Rumely 32x52 separator, in running order, with wind stacker, and one new Janney silo filler husker; filled eight silos. Write for information. Benj. Siegel, Apple River, Ill.

FOR SALE—New Minneapolis 40-80 gas engine, Case 36x58 steel separator, Ruth wind feeder, Moline eight-bottom plows; A-1 condition. C. W. Francisco, Fairfield, Nebr.

FOR SALE—One new Marseilles six-hole corn sheller and drags, and one four-hole Keystone sheller and drags. Will take two-hole sheller with self feed in trade. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—22-44 Nichols & Shepard oil-gas tractor, run less than thirty days since purchased last spring. Owner sold farm. Reason for selling. Price right. Box 155, Powell, Wyo.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—32-horse Reeves steam engine; 40x63 separator; twelve-bottom steam lift engine plow, breaker and stubble bottom; mounted water tank. Will trade for stock. Alfred Elkin, Taylor, N. Dak.

FOR SALE—One 15-Case; one 22-Minneapolis, return flue; one 12-Case; one 8-16 Avery tractor; one Red River Special; two 32-Averys; one 32-steel Case. Priced to sell. Wm. Seyb, Donnellson, Ia.

FOR SALE—Eight-bottom John Deere plow, hand lift, combined stubble and breaker bottoms, two sets of shares; in good condition. Plowed about seven hundred acres. Price \$300 if taken soon. C. Victor Olson, Holdrege, Nebr.

FOR SALE—Wood Bros., outfit, 25-H. P. engine; been out four years. 36x56 separator, run eighteen days; drive belt, Avery tank, all complete. A-1 condition. \$3000 cash. Reasons for selling. E. Shroyer, Lacey, Ia.

FOR SALE—Complete outfit to manufacture any size tile from five to twelve inch, including steam engine, boiler, cars and track, line shaft and pulleys. A snap if taken at once. A. L. Lieske, Henderson, Minn.

FOR SALE—Avery 36" separator; 16-H. P. Rumely steam engine; 34" Rumely separator; 18-H. P. Peerless steam engine; sawmill, complete. Droll & Finck, Advance-Rumely Dealers, 219 E. 4th St., Davenport, Ia.

FOR SALE—12-roll Advance husker, three years old; always sheltered; excellent condition. Price \$345 f. o. b. Oak Harbor, Ohio. Will guarantee or pay one-half your expenses to look at it. The Arbuckle-Ryan Co., Toledo, Ohio.

FOR SALE—Russell separator, 30x46; in good running order and good condition. Come and look at it. Will pay fare to purchaser within two hundred miles one way. J. A. Haas & Son, care Fred O. Haas, R. 32, Mantua, Ohio.

FOR SALE—Bargains. Huber 32x54 separator, complete; never used since rebuilt at factory; \$800. Huber Light Four tractor, slightly used but with new oversize motor, \$985. A. W. Newby, 577 East Center, Marion, Ohio.

FOR SALE OR TRADE—One 12-H. P. gas engine, mounted. One new No. 4 Bowsher mill. One nine-inch double burr Stover mill. One Advance eight-roll shredder, like new. Also Indian motorcycle. Truman Winn, Lansing, Minn.

FOR SALE—40-80 Avery tractor; 36x60 Avery separator, complete, run one season; 18-H. P. Avery undermounted steamer; 32x54 Avery separator; 10-20 Titan tractor and three-bottom Janesville plow. J. B. Clardy, Greenfield, Ill.

FOR SALE—New Huber 20-H. P. No. 10962, jacket and power guide; Huber Western Special 36x60 separator No. 13419, feeder, weigher and wind stacker; threshed less than 30,000 bushels. Will sell at a bargain. John Winholt, Eaton, Ohio.

FOR SALE—Garden City wings, complete, \$125. Happy Farmer tractor, \$250. Galloway tractor and three-bottom plow, \$400. Coleman tractor and three-bottom plow (1919), \$1300. 25-45 Titan tractor \$800. John T. Johnson, Columbus, Nebr.

FOR RENT—640 acres splendid grazing lands, well watered and well fenced. Will pasture three hundred head of cattle. Will furnish this pasture six months, salt the cattle and look after them for \$3,600. B. B. Clarke, Madison, Wis.

FOR SALE—Complete threshing outfit consisting of one 36x60 separator, used two years; one 20-H. P. double Rumely engine, used seven years; one water tank, one new belt. Price \$2,500. Address John Wulf, R. 8, Valparaiso, Ind.

FOR SALE—One 16-H. P. Avery return flue engine, just rebuilt and repainted; looks like new, and one 32x52 Avery separator with weigher, feeder and wind stacker, complete outfit. Geo. J. Kramer, Stout, Ia.

FOR SALE—Aultman Star engine and American separator repairs from original patterns. Orders promptly filled. Send for new repair price list. Engine & Machinery Company, Marion Ave., and Navarre Rd., S. W. Canton, Ohio.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—Threshing rig complete. 65-H. P. Case steam engine with Baker piston valve; Case separator, 36x58, blower, weigher, Garden City feeder and extension steel tank and drive belt. All in extra good shape. Lee Schumacher, Wamego, Kans.

FOR SALE—J. I. Case threshing outfit, complete; 50-H. P. engine, 36x58 separator; has been run five years. Price \$2500. Also one 30-60 Rumely OilPull; used four years. Price \$1600. Reason for selling—going out of business. Anton Juhl, Brayton, Iowa.

FOR SALE—One 25-45 Rumely tractor from OilPull tractor, perfect condition. One 32x56 Rumely Ideal separator. One six-bottom Oliver plow, two sets bottoms, breaker and stubble. Reason for sale, sold farm. \$2,500 cash takes complete outfit. Chester & Son, Valparaiso, Ind.

FOR SALE—One 4x16 foot boiler with 32 four-inch flues; one 32x60 Avery separator, complete with blower, and self feeder; one Avery truck with body; one six-bottom John Deere plow. All stuff in good shape and will take a car in trade or cash. A. W. Kadera, Iowa City, Ia.

FOR SALE OR TRADE for Good Dairy Cows—15-30 Rumely OilPull tractor with high tension, impulse starting Bosch magneto, extension rims and furrow guide, eight-disc Sanders plow and five hundred gallon mounted oil tank. Run three seasons and well shedded, in fine condition. Not farming as much land now. \$1700. G. E. Lee, Pratt, Kans.

FOR SALE—One 30-60 rebuilt International Mogul kerosene tractor. Kept in good shape and in excellent working condition. Extension rims, six-bottom Oliver plows. Price \$1200. Also one 16-H. P. Stover portable gas engine, first-class shape. Price \$250. Arcady Farm, Lake Forest, Ill.

FOR SALE—One complete Nichols & Shepard rig, 25-85 engine and 36x56 separator, with Garden City feeder and wings. Rig has run three falls and is as good as new. Shedded and in the best of running order. \$3500 takes it at quick sale. Write or see, Lawrence Wilmerding, St. Joseph, Minn.

FOR SALE—Closz adjustable sieve, 36x56, \$9. Case blank concave and grates, one-half price. Case extension chaffer, 58x17, one-half price. Case belt tightener pulley with stud and bolt, \$2.50. Rockwood fiber pulley (cylinder), 2 1/4" bore, 9" face, 16" diameter, \$12. Some repairs for Wood Bros. Feeder, 36", at one half price. Holden Farm, Bucyrus, N. D.

FOR SALE—One 32-H. P. cross compound Reeves engine and one 36x60 Russell separator, complete with wing feeder, weigher and wind stacker, also drive belt and water tank, for \$1850. One 25-50 Avery tractor and several other steam engines and rebuilt separators at bargains. Write and state what sizes you want. Schmidt Albrecht Co., Watertown, Wis.

FOR SALE—Steam engines and separators. Avery 40-80 and 30-60 Rumely; also 30-60 Aultman & Taylor tractors. Small separators and tractors for threshing, secondhand. Write your wants. Advance shredder, good as new. L. D. Thorp, 214 Palace St., Aurora, Ill.

FOR SALE—15-30 Aultman & Taylor engine with eight-inch rims. Has Climax motor, one four-bottom P&O engine plow, extra lays, one 295-gallon steel tank on wagon. Prices right. Engine at work. But will sell. Address G. Crotzer, Box 115, Windom, Minn.

FOR SALE—One 12-20 E. B. tractor. Overhauled and equipped with new type manifold. Excellent condition. Price \$850. One 9-18 Case, rebuilt, good as new, only \$800. One three-bottom E. B. tractor plow in good condition. One Overland Model 83. E. E. Freeman, Fithian, Ill.

FOR SALE—20-H. P. Avery engine, return flue; 36x60 Avery separator, complete; 15-H. P. Case steam engine; 20-inch Racine separator, complete; 12-H. P. McVicar portable gas engine; 10-20 Titan tractor, complete. Indiana Parrett Tractor Co., 46 Kentucky Ave., Indianapolis, Ind.

FOR SALE—A-1 steam threshing outfit with 160 acre farm and crop; all horses, harnesses, cattle, hogs and farm machinery with blacksmith outfit going at \$150 per acre. Extra good land and water, on the banks of Kelly Creek. A bargain to one looking for a good home. Six miles from town. J. J. Lee, Bordulac, N. D.

FOR SALE OR TRADE—36x62 Minneapolis separator with wing feeder, \$500. 36x60 Rumely wing feeder, \$400. 36x60 Advance wing feeder, \$300. All of the above machinery ready to go in the field. 35x70 Nichols-Shepard tractor, almost new. \$2500. Faulds & Danielson, Ivanhoe, Minn.

FOR SALE—60-H. P. Case engine No. 29164; 36x58 Case separator No. 63366; 50-H. P. Case No. 32876; 32x54 Case separator No. 69688; 32x54 Case separator No. 57785; 20-H. P. Huber engine No. 10412; 32x54 Huber separator No. 11970; 28x46 Minneapolis separator, Box 62, Norfolk, Nebr.

FOR SALE—240 acres of land in Taylor County, Wisconsin, partly marsh that can be drained, partly rich clay cut-over land, every acre can be utilized. One eighty and four forty-acre tracts. Will sell whole tract for \$4,800, half cash, balance ten years, five per cent interest. B. B. Clarke, Madison, Wis.

NEW SELF FEEDERS AND WEIGHERS—At special reduced prices to clean out surplus stock. Are complete with attachments to fit Pitts steel frame Niagara No. 2 separators but can also be fitted to any other make. For sale by Wagner-Langemo Co., 418 First St., North, Minneapolis, Minn.

FOR SALE—One 18-H. P. double cylinder Coleman. One 22-H. P. single cylinder Gaar-Scott. One 18-H. P. return flue Gaar-Scott. One 16-H. P. single cylinder Gaar-Scott. One 16-H. P. single cylinder Advance. One 18-H. P. return flue Minneapolis. One 30-60 International gas tractor. These engines are all rebuilt and in fine working order and will be sold cheap to close the business. Donner & Risser, El Paso, Ill.

FOR SALE—Threshing and baling outfit. One 12-36 Case steam tractor, in A-1 shape, ready to go in the field; run six seasons. One E-Peerless 24x38 New Garden City feeder and common stacker, in good shape. One 17x22 Case power press; has baled only one hundred tons. The above machinery is all in excellent condition, ready to go right into the field. Price \$1650. Frank S. Walton, R. 1, Huntington Valley, Montgomery Co., Penn.

FOR SALE—Thirty-three steam engines, thoroughly rebuilt—Avery, Case, Advance, Minneapolis, Port Huron, Geiser, Buffalo Pitts, Nichols & Shepard, Russell. Eight gas tractors—three Reeves 40-H. P., one Case 30, one Flour City 30, one Avery 12. These tractors are very suitable for road grading. New and rebuilt separators. New belts and weigher. Write for sizes wanted. We consider trades. Burkhardt, Baldwin & Gree, Sioux Falls, So. Dak.

FOR SALE—25-45 Rumely OilPull; 15-30 Rumely OilPull; 25-H. P. Cross compound Reeves traction engine; 18-H. P. Baker; 16-H. P. Russell; two 32x52 Rumely separators; 30x48 Rumely; 30x52 Reeves; No. 6 Birdsell huller, six-roll Advance husker. Will sell separately. This machinery ready to go to work. Aug. Hohenbrink, Kalida, O.

FOR SALE—One Minneapolis separator, size 36x56, run seven falls; equipped with Landgon feeder, Hart Brown wings, Peoria weigher with swinging cross conveyor; two 16-inch extension tires to slip over 36-inch wheels; one Finnegan stacker hood; one No Choke chaffer for 56-inch Minneapolis separator. Yahnke & Delmage, West Brook, Minn.

FOR QUICK SALE—One 40-80 Avery tractor, 1919 model; run less than twenty days. One Aultman-Taylor 32x50 separator; run seven seasons. \$3600 takes this outfit. One 20-35 Avery tractor, one 22x36 Avery separator. This outfit has just been factory rebuilt. \$1200 takes this outfit. All are in perfect condition and ready at a minute's notice. Peck Bros., Wyoming, Iowa.

FOR SALE—Twenty-five hundred feet of lightning rods, including three dozen each long and short tops, four dozen glass balls, eight weather-vanes, and other supplies for complete rodding outfits, round and ribbon copper cables. Will sell at cost in parts or complete outfits. Send measurements and advise what you need. Maurice A. Park, 1114 East Johnson St., Madison, Wis.

FOR SALE CHEAP IF TAKEN AT once—One 41x66 Niagara Second Pitts separator, wood frame. Plain separator without feeder or blower or weigher. New belts, grain pans, straw racks, shoe teeth, and newly painted, always shedded. Also one No. 12 Valentine grain elevator with truck complete. Used only two days. Please write me for prices if interested. Frank D. Morrill, Janesville, Minn.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8,500, half cash, balance long time. Object for selling have larger tract which desire to improve. S. M. Hashbarger, care Clarke Publishing Company, Madison, Wis.

FOR SALE—One Avery tractor, 25-50, run one and a half seasons; just like new; guaranteed. One Gaar-Scott 16-H. P. steam engine with new fire box and flues. One Rumely separator, 32x52, run five years, with blower and feeder; first-class condition; all overhauled. One Avery separator, 36x56, six years old, in fine shape. One Depere Lauson 24-H. P. on truck with clutch pulley; run two seasons; just like new. Two International Titan 8-H. P., five years old, on trucks, with clutch. One Globe 7-H. P. with truck and clutch; in fine shape. H. Luloff & Sons, St. Nazianz, Wis.

FOR SALE OR TRADE—One 22-H. P. Advance engine, 36-inch Nichols & Shepard separator, Garden City extension feeder, tanks, wagons, complete. One 24-inch Geiser separator, complete with drive belt, run one season. 25-H. P. Nichols & Shepard engine, good as new. One 25-H. P. Gaar-Scott with 36-inch Minneapolis separator, Garden City feeder, complete rig. One Gaar-Scott complete rig, run two short seasons. Prices and terms that will sell. If goods are not as represented, railroad fare will be refunded. Fanset & Cole Land and Machinery Co., Watertown, S. D.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5,000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5,000 or more cash, balance as long as desired, six per cent interest. The pasture alone with the timber on the tract would pay for it, in a few years. B. B. Clarke (Old Site), Madison, Wis.

FOR SALE—1918 Aultman & Taylor 25-50 gas tractor; no loose bearings; ready for your heavy work; \$1300. Will trade for from 10- to 16-H. P. steam engine. One 24x36 Avery thresher, used five days; 1920 model with roller bearings on cylinder and blower; \$1100. One 1919 12-25 Avery, used eight days; good as new; \$725. One B. P. Avery three-bottom fourteen-inch stubble plow, new, \$150. One Aultman & Taylor 32" separator with weigher, feeder and blower; ready to thresh and only \$150. One 1920 14-28 Avery tractor, used four days but is good as new; \$1300. One 25-50 1919 Avery, used about twenty-five days; looks and runs like new; \$1600. All machinery f. o. b. cars here at Shenandoah. T. W. Maxwell, Shenandoah, Iowa.

FOR SALE—28-H. P. direct flue, single, simple Minneapolis engine, rocker grates front and rear water tanks, fuel bunker, capacity 800 lbs. coal, full steel cab, two injectors, one double cylinder steam boiler pump, automatic coupler, six-inch steel gears, flues and boiler in O. K. condition, including sixteen-barrel steel wagon tank, complete. 40x62 Minneapolis standard separator, wind stacker, Garden City feeder with wing carrier, weigher with swinging conveyor, fiber cylinder pulley, 12" ground wheels, all necessary sieves, all belts are O. K.; automatic steering pole, bearings are in A-1 shape. This outfit was at all times operated by experienced men. Canvassed when in the field; housed when out of season. Run three falls or one hundred and thirty-six days. Consideration \$4000 for complete outfit. Johnson Implement Co., Guckeen, Minn.

MISCELLANEOUS

WANTED—I. H. C. trailer hitch for Deering binder. Winter Bros., Pipestone, Minn.

WANTED—Fan housing for Case geared blower, 36x58. Must be good. G. Shold, Albert City, Ia.

WANTED—32" or 28" separator, Adams road grader. For Sale—20-35 Avery tractor. O. E. Swearingen, Neponset, Ill.

WANTED—Reeves 25 or 32-H. P. cross compound engine. State age and price. Box 96, Morse Bluff, Nebr.

WANTED—To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

WANTED—Set extension lugs for 8-16 Mogul. One 14 1/4" friction pulley for 8-16 International four-cylinder tractor. Leeburg Hardware Co., Leeburg, Penn.

WRECKING A 30-60 Hart-Parr, I have the crank shaft and one new cylinder and many other parts. Also Ruth 40-inch feeder with Carpenter wings. John E. Sykora, Windon, Minn.

CASE STEAM TRACTOR 9x10—This outfit is in fine working order. Want to make a quick sale. Price \$850. Boiler and engines tested. Harris Machinery Co., Minneapolis, Minn.

ANVILS—Brand new all steel, 70 to 75 lbs. government surplus, all U. S. inspected and guaranteed. Highest grade. Bargain price \$14.50. Harris Machinery Co., Minneapolis, Minn.

WE SPLICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebores cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

WANTED—Fordson tractor; wind stacker for 50" wood Case separator, Maplehay preferred. State price and conditions. C. W. Bickett, R. 1, Box 26, Ramona, S. D.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

BOILER TUBES—BOILER TUBES— Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

BELTS COST MONEY—Have your can- vas threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

FEED MILLS—\$20 for an all-steel eight- inch burr mill. Other sizes not available. These are real bargains. Harris Machinery Company, Minneapolis, Minn.

USED FOR SALE—20-40 Case gas tractor with 32x54 Case steel separator, feeder, grain handler, swinging attached stacker and drive belt, ready for work; used four falls, always housed, \$1700. 15-H. P. Case steam tractor with original flues that do not leak, fine shape, \$1000. 32x54 Case separator, feeder, swing attached stacker and grain handler, \$450. 10-20 Titan tractor with Oliver three-bottom plow, \$600. 22-H. P. Stover portable gas engine rebuilt, \$300. Staudemak-A-Tractor for Ford car. Never uncrated, \$75. One 14-H. P. Stover stationary gasoline engine with friction clutch pulley. Perfect condition, price right. Taken in trade for tractor. f. o. b. cars. Manley Hardware Co., Harvard, Ill.

Motor Boats and Boat Motors

A book written by a corps of experts and edited by Victor W. Page, "Motor Boats and Boat Motors," covering the subjects of design, construction, operation and repair, has just been published by the Norman W. Henley Publishing Company of New York, and sells for four dollars.

This is a complete handbook for all interested in any phase of motor boating, as it considers all details of modern hulls and marine motors, deals exhaustively with boat designs and construction, design and installation of all types of marine engines and gives expert advice on boat and engine maintenance and repair. Not only is boat construction fully treated but every needed dimension is given for building from complete, yet simple plans, and construction is considered step by step. Everything from the selection of the lumber and laying out the boat molds to finish of the completed craft is outlined in detail. The boats described have been built by the author and the plans are right. The book has also a special chapter on seaplanes and flying boats.

Regarding Cash Sales

The Federal Reserve Board has become very strict in regard to what the trade calls "automobile paper." The general reason for this has been the great inflation of the credit reserves of the country. One particular reason, in the Middle West, has been the fact that the financial resources of that section have been strained to the limit by the need of

financing last year's wheat crop; this has not moved as usual, due to the railroad situation.

This means that the dealers must depend on cash sales more than heretofore. In looking over the field, it is apparent that no class of men is as well prepared to make cash payments as the farmers will be, after harvest.

Electrical Equipment for Cars

Automobile starting, lighting and ignition systems are things of mystery to many persons who drive cars. To fill the need for a text giving detailed and copious information about these subjects a book by Victor W. Page, "Starting, Lighting and Ignition System," has been published by the Norman W. Henley Publishing Company of New York, and sells for three dollars.

It can be understood by anyone, even without electrical knowledge, because elementary electrical principles are considered before any attempt is made to discuss features

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest References. Prompt Service. Reasonable Terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.



Don't Throw Your Good Reliable Iron Pulleys Away

The Buller Lagging Stretcher eliminates all the trouble that you have had in covering pulleys. This little machine will do a wonderful job of covering pulleys and do it in a surprisingly short time. Adjustable for different sizes of pulleys. Sold on trial as are all other Buller products.

Send for catalog giving price and further information.

Buller Coupler Company
Hillsboro - Kansas



One Good Hot Spark in a little loose chaff and the fireworks begin. Many a thresherman has seen his savings for years go up in smoke in this way and not only the threshing outfit, but the customer's grain and buildings, too. Prevent this ever happening to you and your customers. The small cost of a

South Bend Spark Arrester

will save you from all danger of fire and the worry about the possibility of a fire. It will fit any engine stack and will not hinder the draught.

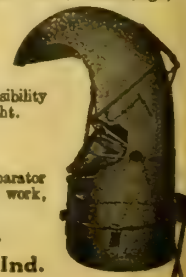
A South Bend Stacker Hood

places the straw where you want it and is easily handled by the separator man. It is sold on a make-good trial basis. If it doesn't do your work, you return it and it costs you nothing but your time in trying it.

Write for prices of one or both of these products.

South Bend Spark Arrester Co.

South Bend, Ind.





International Farm Machine Headquarters

TODAY the country roads lead from millions of farm homes to the establishments of the International Dealers—and back again to the fields. Quality machines, fair dealing, and a matchless service policy form a triple foundation that has made the store of the International Dealer an *essential* institution in any community. Choose your farm equipment there—and *standardize* your machines as you would your cattle, hogs, and poultry. This is the safe course, with many benefits. Then you may take quality and efficiency for granted and rely on your dealer and on us for service and help at any time, in any emergency. The International Dealer will help you stock your farm with thoroughbred machines.

INTERNATIONAL HARVESTER COMPANY

CHICAGO OF AMERICA USA
(INCORPORATED)

92 BRANCH HOUSES IN THE UNITED STATES



Speed the Corn Harvest

A CASE Kerosene Tractor will provide the power to harvest your corn at least cost and in best condition.

You know that corn *must not* be cut until the ears are "filled;" it *must be* cut before the leaves are withered and worth little or less for feed. You know that it is almost impossible for flesh-and-blood power—either man or horse—to face the pitiless September mid-day heat, and finish the corn harvest on time.

The 10-18 Case Kerosene Tractor has ample power to operate any corn harvester, and later, to furnish the belt-power for husking and shredding the same crop.

The 15-27 or 22-40 Case Kerosene Tractor will do the same work with the same efficiency and have the greater power required for other work on belt or draw-bar, especially on farms of great acreage.

Case Kerosene Tractors are mechanically capable of long service, and agriculturally adaptable to any service requiring dependable farm power.

Write for catalog showing the profitable usefulness of Case Kerosene Tractors in every month in the year.

J. I. CASE THRESHING MACHINE CO.

(INCORPORATED)

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Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842

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TRADE MARKS REG. U. S. PAT. OFF

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KEROSENE

TRACTORS



Look for the
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To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the J. I. Case Plow Works Co.

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The **AMERICAN THRESHERMAN AND FARM POWER**

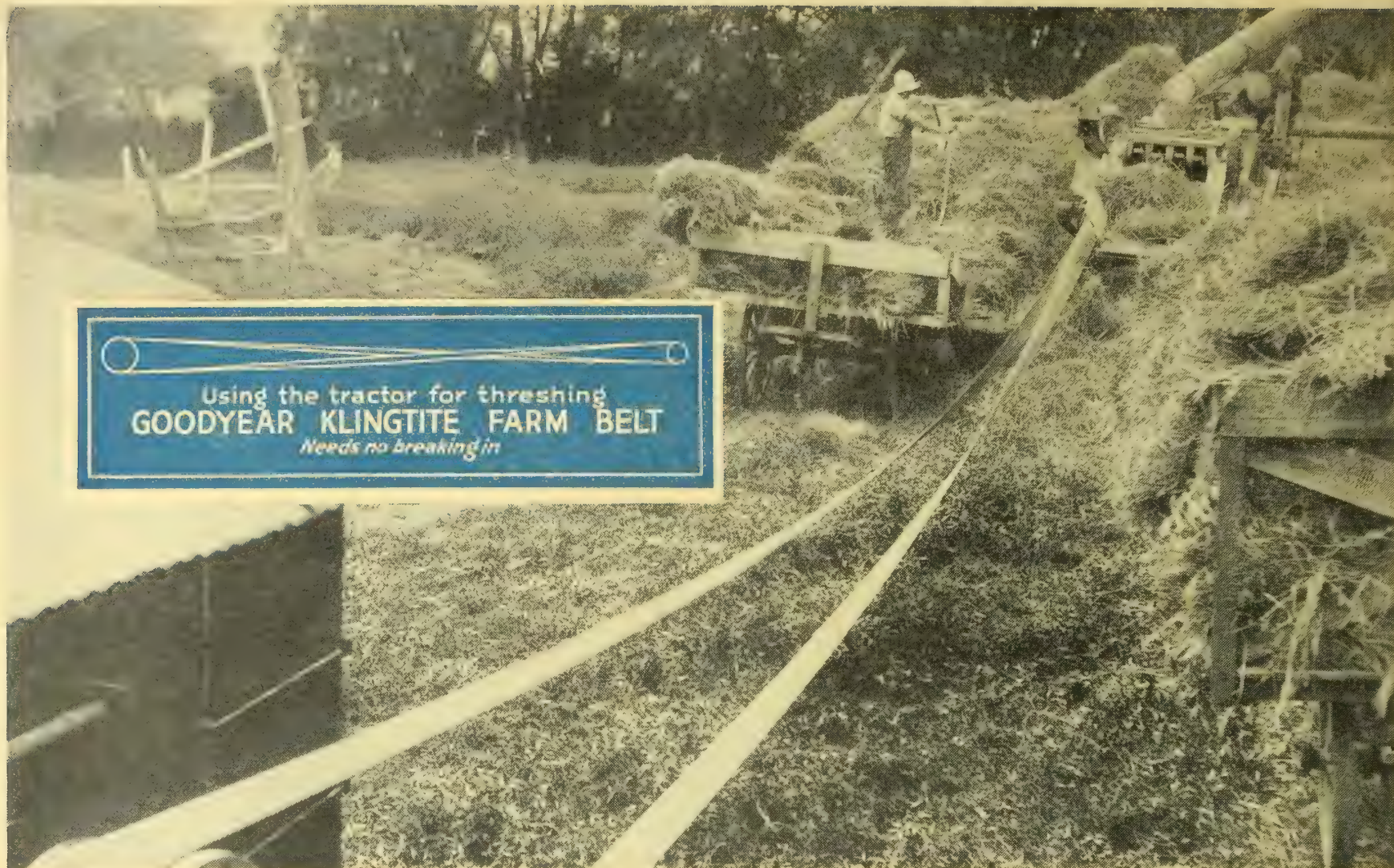
MADISON, WIS.

**State
Fair
Number**

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Using the tractor for threshing
GOODYEAR KLINGTITE FARM BELT
Needs no breaking in

Copyright 1920, by The Goodyear Tire & Rubber Co.

Profitable Threshing and Goodyear Belts

Every farmer will say threshing is fast, hard work—in many respects, the most exacting toil on the farm. In its brief season, tense with the hazards of weather and with hopes of “topping” the market, the results of year-long plan and labor are proved in a trying test of men and machines. At this critical time, no part of the farm power equipment responds with more certain performance than does a Goodyear Klingtite Belt.

The success of experienced threshermen generally with this Goodyear transmission belt is reflected in the testimony of Mr. A. L. Swenson, of Swenson Bros., Cannon Falls, Minn., who has been seven years in the threshing business and now has a 150-foot, 8-inch, 5-ply Goodyear Klingtite Belt on his separator.

In the first place, it gives no trouble, Mr. Swenson says. He cannot say that for other belts he has known. Most that he had to deal with before he got his Goodyear Klingtite were hard to break in. The night dews shrank them, and they stretched under the noonday sun; so that he often lost valuable threshing time in engine re-setting. One, he remembers, stretched under the tension of power delivery.

His Goodyear Klingtite Belt needed no breaking in. It requires no belt dressing. It is proof against moisture, cold and heat. The only time he ran it taut last season was during a high wind; at all other times, it ran loosely, favoring the engine bearings by its free-swinging action. It delivers the full power of the engine through its slipless, friction-surfaced grip on the pulleys.

These qualities count—in time, in money, in labor and in power. The more completely motorized a farm is, the more valuable are the long-run, long-life economies of the Goodyear Klingtite Belt equipment. One of these belts—a Goodyear product, designed to its work and built to protect our good name—assures a separator efficiency that keeps pace with the hauling abilities of a fast-moving, heavy duty motor truck.

Goodyear Klingtite Belts for threshing are obtainable in endless type, from Goodyear branches and dealers. For other farm work and machines, you can get Goodyear Klingtite Belts in whatever lengths you require. Detailed information about them is contained in the Goodyear Farm Encyclopedia. Write to The Goodyear Tire & Rubber Company, Akron, Ohio, for a copy.

GOODYEAR
KLINGTITE BELTS

MOLINE

The Universal Tractor



The correct way. One man handles the entire outfit and sees his work.



You wouldn't think of riding your horses. Of course this method is wrong whether horses or tractors are used to pull your implements.

The Moline Tractor follows the proven principle. One man operates the entire outfit from the seat of the implement, where he is in the best position to observe his work.



In a 10-hour day one man and a Moline Tractor can plow from 7 to 9 acres; disc from 25 to 35 acres; seed from 25 to 35 acres; mow from 25 to 40 acres; cultivate from 12 to 20 acres; and harvest from 25 to 40 acres. In addition the machine will do a great variety of other work and all ordinary belt jobs.

Compare these results with those of ordinary methods. In many cases the Moline enables one man to do at least twice as much work. These facts are borne out by the results obtained by Moline owners.

Moline owners in 37 states say that the Moline Tractor saves an average of one man per farm, as well as five horses, because it does all field work, including cultivating.

The Moline Tractor increases production by enabling one man to do more work, and decreases the cost of production by saving help and horses.

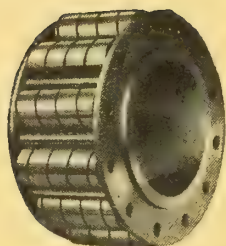
Profits of from \$500 to \$2200 a year, from the Moline Tractor alone, are being reported by Moline owners from all sections of the country.

MOLINE PLOW COMPANY, MOLINE, ILLINOIS

HYATT

ROLLER BEARINGS

For Abundant Harvests



HYATT Bearings are built on a principle fundamentally correct—carry the severest loads under all conditions without wear on the rolling parts and never require adjustment.

Because of their greater capacity for lubricant they require less attention for oiling than any other bearing.

The unequaled quality of Hyatt Roller Bearings has been proved by actual and successful use in almost every application in which an anti-friction bearing can be used.

TO make harvests more abundant—to make farm profits larger—to make farm work easier and farm life happier—these are the achievements of power farming machinery.

And it is highly significant that in the best of these machines whether they be trucks, tractors, plows, threshers or other agricultural implements, you will find one constructional feature in common—Hyatt Bearings.

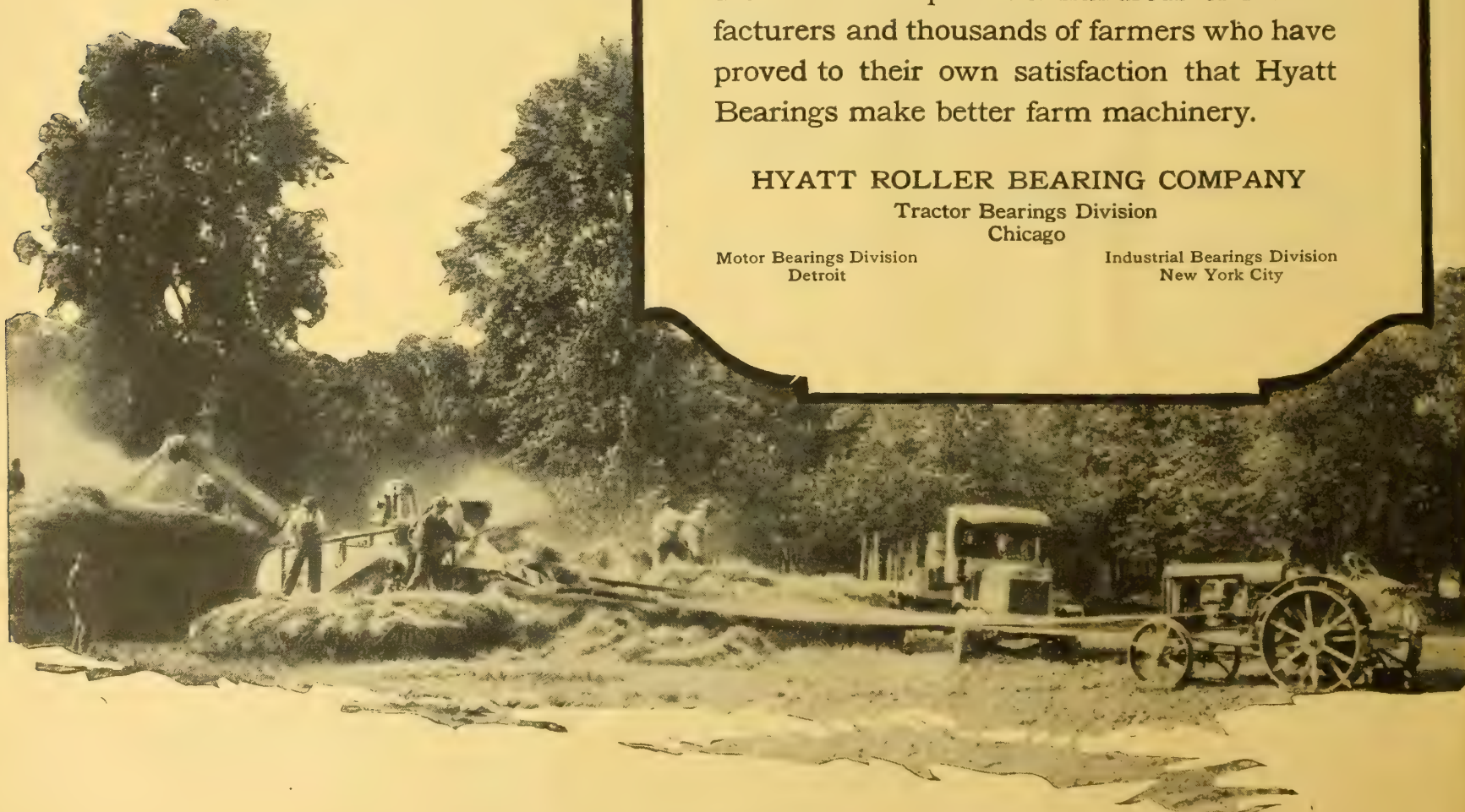
This universal use of Hyatts expresses the combined opinion of hundreds of manufacturers and thousands of farmers who have proved to their own satisfaction that Hyatt Bearings make better farm machinery.

HYATT ROLLER BEARING COMPANY

Tractor Bearings Division
Chicago

Motor Bearings Division
Detroit

Industrial Bearings Division
New York City



The AMERICAN THRESHERMAN AND FARM POWER



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Six had to change

*The lubricating experiences of six tractor manufacturers
who were looking for engine results*

THE following extract from a report of a national tractor show may interest farmers who say, "The oil wouldn't make any difference."

"In the preliminary trials made in the week preceding the demonstrations six tractor manufacturers found that they were not obtaining the best results from their tractors and consequently came to the Vacuum Oil Company for the correct grade of Gargoyle Mobiloils for their particular machine and used it from that time on, thereby overcoming the operation troubles that they had with other oils."

The Vacuum Oil Company Board of Automotive Engineers have carefully analyzed the lubricating requirements of every make and model of tractor. They have determined the oil that will meet these requirements with scientific exactness.

The use of this correct oil will insure you engine results. The correct grade for your tractor is specified in the Chart of Recommendations shown at the right. If your tractor is not listed, write our nearest branch for our book on "Correct Lubrication for Tractors" which contains the complete Chart.



Mobil oils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC	New York	Philadelphia	Pittsburgh	Indianapolis	Des Moines
BRANCHES:	Boston	Chicago	Detroit	Minneapolis	Kansas City, Kan.

Chart of Recommendations for TRACTORS

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

[illegible]

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, AUGUST, 1920.

No. 4.

Mr. Binney knows road conditions both here and abroad. A Nebraskan by birth, he is a Missourian by occupation. During the recent war he had the strenuous job of keeping General Pershing's private train in working order. He is now advertising manager of the Traffic Motor Truck Corporation, St. Louis, Mo.



M. S. BINNEY

Trucks to the Rescue

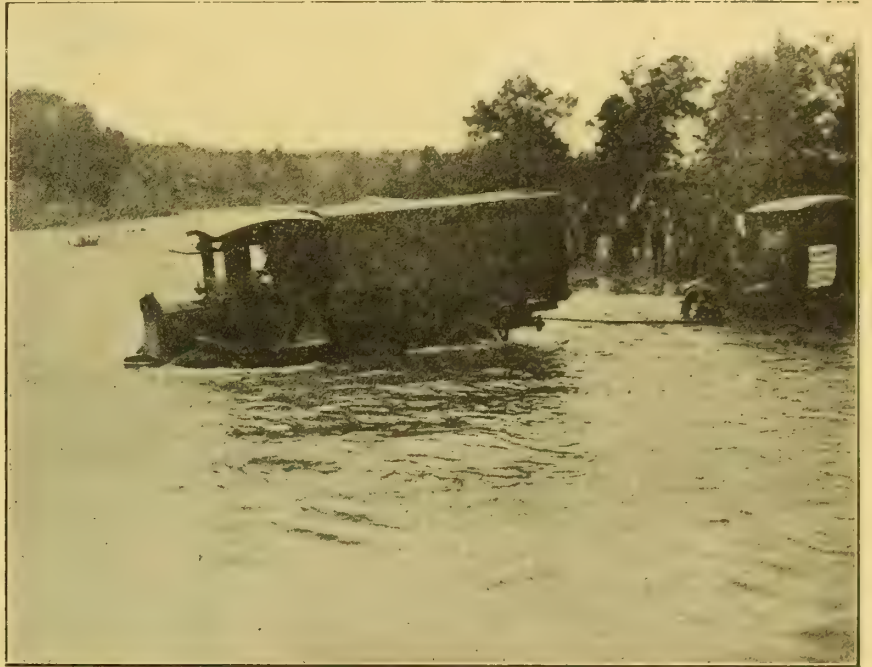
BY MILLARD S. BINNEY

The route lay along the Mississippi from St. Louis to Cape Girardeau, Missouri, and along the other side of the river from McClure, Illinois, through Anna, Murphysboro, Du Quoin and Bellville, back to the starting point.

Only pictures can tell a true story of the difficulties encountered and overcome. At De Sota, Missouri, a creek was out of its banks and the water running very swiftly. Waiting for the tourists were several teams with which the farmers expected to pull the trucks across the stream. But, even with the water to the tops of the wheels the entire way across and well over the frames in the center, the muddy crossing was accomplished without animal aid. Several of the trucks not only made it under their own power but assisted others with tow ropes.

On the Illinois side the company met its greatest hindrance in the bottomless seas of gumbo, between Anna and Du Quoin. There the trucks emerged from one hole only to drop in to the axles in another a few yards beyond. And such mud! In tenacity it resembled chewing gum more than anything else in the world. To go eleven miles between Murphysboro and Elkhartsville, it required sixteen hours. Between Anna and Carbondale many of the drivers spent a full twenty-four hours at the wheels without a bite to eat.

But the tour was a greater success because of these adverse conditions than it would have been otherwise. To the people along the route, it furnished tangible evidence of the stamina that is actually being built into modern



This Sturdy Truck Carried Three Thousand Pounds and Towed a Small Car Across a Flooded Stream.

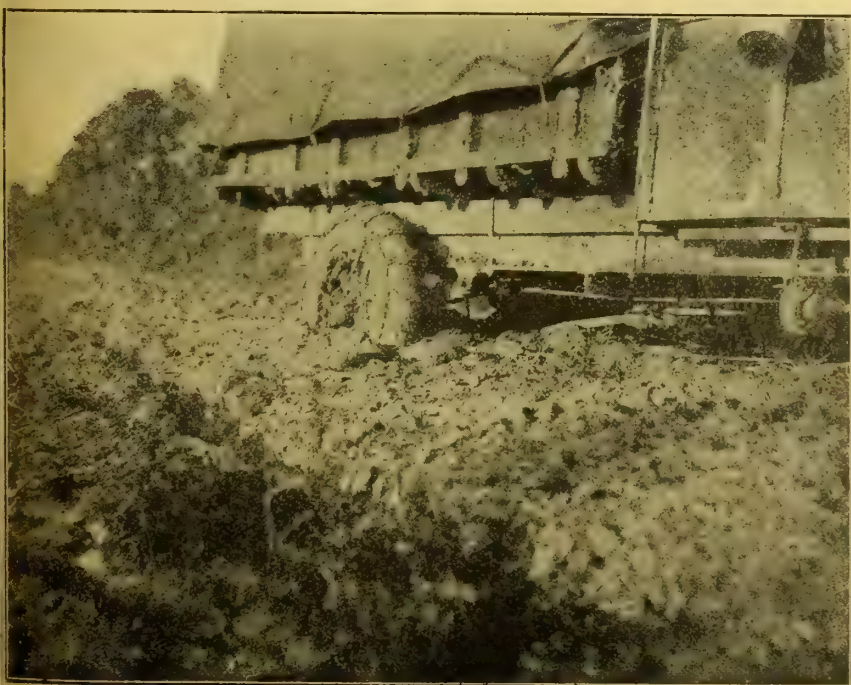
trucks. It proved to them without question, if it were possible for trucks to pull loads over such roads as existed, that hard-surfacing would guarantee dependable transportation regardless of the weather or the season.

But why truck tours, good road associations and the other activities of this nature? Why are additional transportation facilities necessary? Is money spent in good roads an investment that will pay definite dividends to each citizen regardless of his vocation or wealth, or is the result a luxury to be enjoyed by the few?

A brief analysis of the difficulties now affecting the railroads and the nature of help promised by trucks, will show the causes for good roads agitation at the present time.

The railroads have always been, and will continue to be, the very backbone of our national existence. In considering the extensive use of motor trucks, it should be done with the view of cooperating with the railroads rather than competing; with providing for our country a great national transportation machine, component parts of which are all kinds of transportation now in use, each doing that part of the work for which best adapted and relieving the others of hauling for which they do not have the facilities and which they handle at a loss. Thus agricultural and industrial production would be encouraged, steady employment assured, credit stabilized, property valuations increased and the high cost of living reduced.

The railroads are unable at the present time to carry the volume of tonnage; that which they



Not the Worst Road Encountered, But a Fair Sample.

(Continued on page 52.)

Insure Against Dust

SOME FACTS ABOUT EXPLOSIONS IN SEPARATORS

ALL threshermen hate smutty wheat. Few of them realize its dangers. Before getting frightened, make sure you live in a section of country where smut is apt to act like gunpowder.

If you live in Whitman County, Washington, take special precautions before threshing season. Some of the remarks made to us by a government expert, on his visit to The American Thresherman and Farm Power editorial rooms, impel us to offer this advice to our good readers of the Northwest.

Whitman County has low humidity: the air there is very dry. Ninety-nine times out of a hundred this is a blessing, as far as man's comfort is concerned. Combined with the presence of smut, it becomes a grave danger at threshing time.

Whitman County has no monopoly on this danger. By drawing a circle with a hundred-mile radius from Walla Walla, the worst section of the United States for grain-dust explosions would be covered. From New York state westward, however, there are occasional explosions of this nature. Sometimes these explosions take place in barns, more often in the separator. Colorado seems to offer, after the Palouse country of Washington and Idaho, the worst combination of climate and smut to produce grain-dust explosions.

Smut seems to thrive in the Northwest. Government investigators have found small fields of wheat that showed thirty-five per cent smut; this is very unusual. By the expression "thirty-five per cent smut," it is meant that thirty-five out of every one hundred kernels are smut balls. A conservative estimate has been made that only about one field in one hundred is free from smut. This estimate covers what is known in the Northwest as the Palouse country.

Smut alone is disagreeable but not dangerous. The danger arises from the static electricity of this section. Sparks several inches long can be seen at night, about a separator cylinder; shorter sparks in great numbers can be seen at dusk between the cylinder teeth and the concave teeth. As high as sixty thousand volts of electricity have been registered. This

means that the combination of smut and electricity has great explosion power.

It is impossible to foresee an explosion. There is no warning. A machine often runs best just before exploding.

A Whitman County farmer had engaged a photographer to take a picture of his threshing outfit at work. The machine was running well on a big job

and the photographer had completed his preliminary set-up. The time for shooting the view was so imminent that the usual line-up of auxiliary farm-hands, anxious for a good center front position, had taken their places in the foreground. Just before the bulb was pressed a muffled explosion took place. A grain-dust explosion had attacked the principal "posers" from the rear. The photographer had the opportunity of a life-time but in the excitement he thought of "first aid" instead of pictures, so that when the picture was snapped the golden moment had passed. He was in a position, however, to get a fine set of pictures showing the fire damage that can be done by grain-dust explosions.

The danger to the thresherman is not the only consideration. The expense of the possibility is great. Insurance rates against explosion, in Whitman County, have averaged eleven dollars per hundred-weight of machine. An average twenty-eight-inch steel separator outfit would have to pay two hundred dollars for protection. As the average season's run is twenty days in this

county, the cost becomes prohibitive.

Mr. E. J. Dineen, of Farmington, Washington, was confronted with this problem. He transferred a dust-collecting fan from another machine of the same make to his machine, and had his machine wired against static electricity. The total cost of material and labor was one hundred fifty dollars. Mr. Dineen had saved fifty dollars and his machine was protected against most dangers of explosion.

This may occasion surprise: Federal experts have failed to find a case

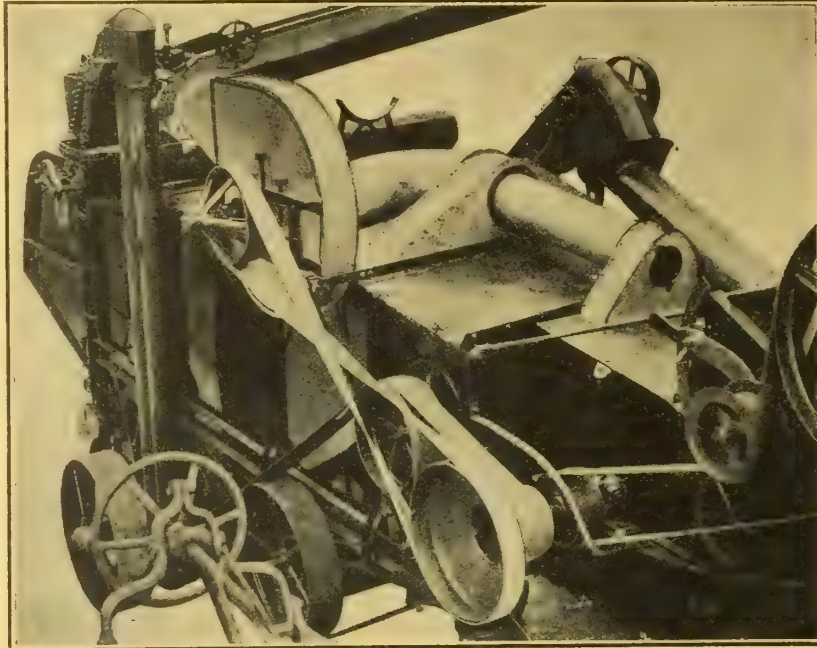


Fig. 1. This Fan Is Driven from the Cylinder Shaft.

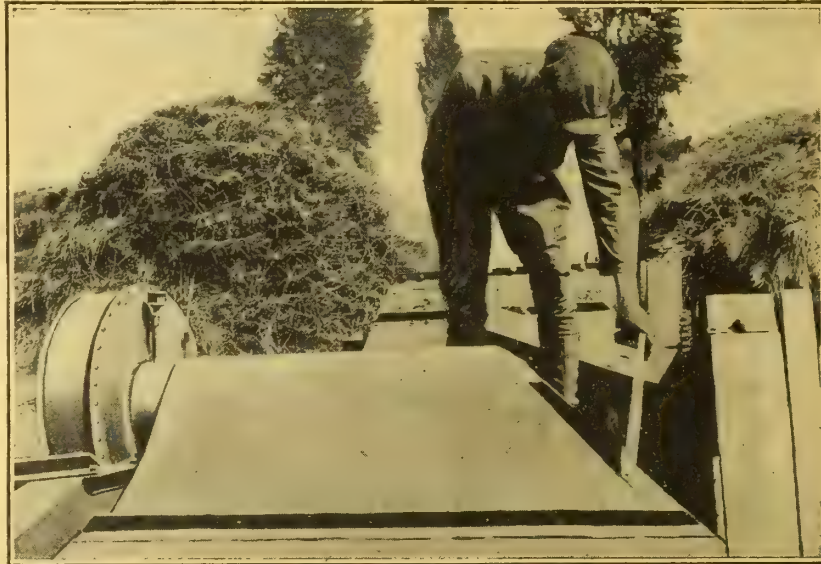


Fig. 3. Here Is a Single Inlet Fan of Metal.

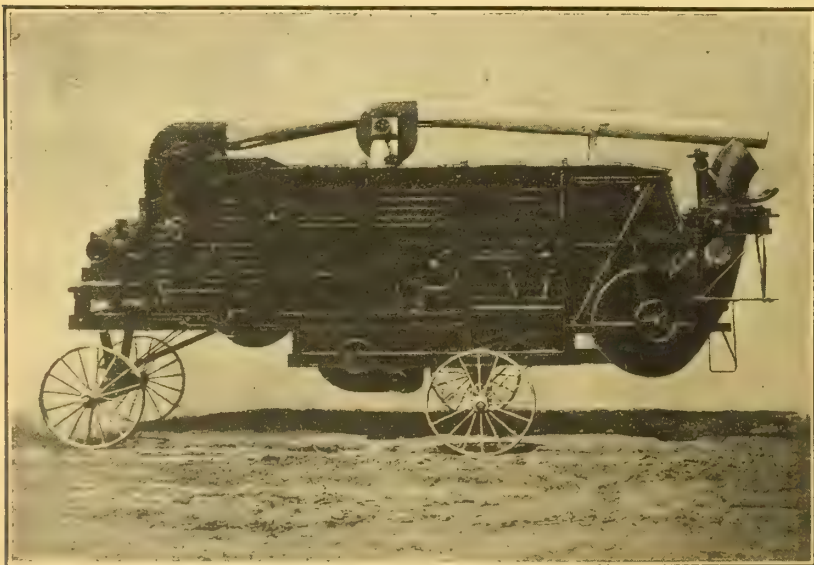


Fig. 2. The Three-Fan Equipment Collects Much Dust.

of explosion where the separator was protected by both dust-collecting fans and wiring.

Many explosions take place at "cleaning-up" time. The greatest amount of dust finds its way into the separator at this time. It will be well, therefore, not to celebrate too early your escape from this danger. Many a good thresherman has had an explosion just as he was "shutting down."

Many threshermen will never have a need of dust-collecting fans on their machines. The Bureau of Chemistry recommends their use wherever smut in considerable quantities is to be found, regardless of locality. Mr. Byrne, of Garfield, Washington, had his separator equipped with one in 1916. Since then, many explosions have occurred in his neigh-



Fig. 4. Side View of Single Inlet Fan.



Fig. 5. Rear View of Single Inlet Fan.

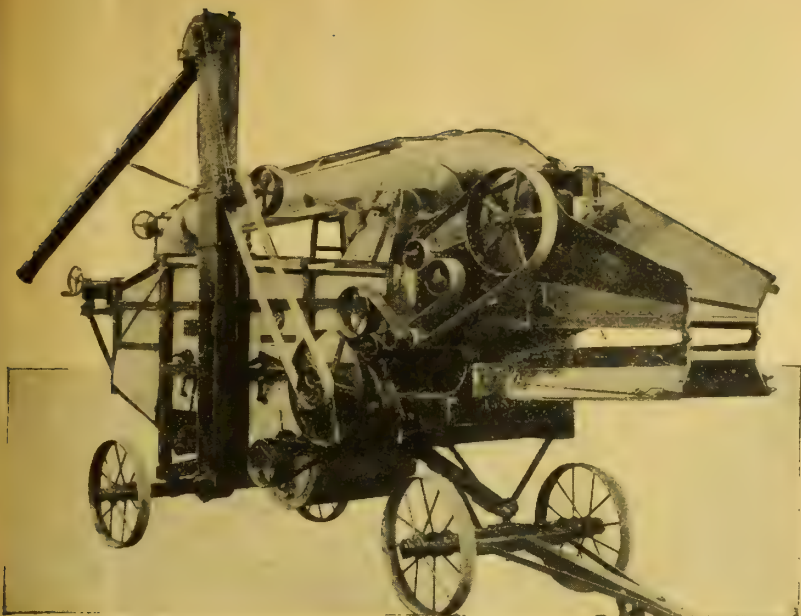


Fig. 6. A Double-Inlet Metal Fan Is Recommended.



Fig. 7. A Wooden Fan May Be Used.

borhood. He has had no such trouble. A fine bulletin entitled, "The Installation of Dust-collecting Fans on Threshing Machines for the Prevention of Explosions and Fires and for Grain Cleaning," has been published by the Department of Agriculture. It has been written by H. E. Roethe, Jr., Assistant in Grain Dust Explosion Prevention, Bureau of Chemistry, and E. N. Bates, Investigator in Grain Handling, Bureau of Markets. Mr. Roethe, a graduate of the University of Wisconsin, is now at Washington, completing his report of a year's investigation of the Northwest. Mr. Bates will continue this good work in Oregon.

The bulletin speaks as follows of dust-collecting fans. It is worth while to note each one of the fifteen points discussed.

Because of the peculiar and characteristic construction of the various makes of threshing machines it is impossible to give detailed specifications of a fan installation adaptable to all types of grain separators. Details of construction and the method of attachment of equipment vary with each machine. In the selection and installation of dust-collecting fans, special attention should be given to many important features. Extensive investigations and experiments have shown that to be most effective and satisfactory such equipment for threshers should embody as many as possible of the following general points of design and construction.

1. A centrifugal-type, steel-plate exhaust fan is most desirable.

2. A single-inlet-type fan has the advantage of offering the least obstruction to the deck.

3. The fan drive should be as direct as possible from the cylinder shaft. The fan pulley should be as large as practicable to

prevent undue slippage of the belt. A minimum diameter of four inches is suggested.

4. A light-running fan, of simple but rigid construction, securely attached to the frame of the separator, answers the purpose best.

5. Ample exterior bearings should be provided, with no overhang of the shaft.

6. For medium-sized machines, ranging from 26x46 inches to 32x54 inches, the fan should have a peripheral speed of approximately 6,500 feet per minute, with a capacity, under field conditions, of from thirty-five to forty cubic feet of air per second. These values would be slightly greater for the larger and slightly less for the smaller machines. With fans of different sizes the revolutions per minute may be varied to obtain the constant peripheral speed suggested. Based on these figures, a fan of average size, twenty-one inches in diameter from tip to tip of vanes, should run at a speed of approximately 1,200 revolutions per minute. The same results could be secured with a larger fan operated at a lower speed or with a smaller one operated at a higher speed. The smaller fan, of course, has the advantage of occupying less space. The air resistance of such a fan operating under general threshing conditions would be a pressure of approximately two ounces. Because of the many variables which enter into the operation of a fan, it obviously is almost impossible to give definite information on this subject.

7. The eye or inlet of the fan should be located opposite the fan pulley at the center of the casing. The discharge pipe should have an area at least as great as that of the inlet.

8. To collect dust and other light foreign material from the separator most effectively without removing the heavier particles, a fan must handle or remove a large volume of air with a very gentle movement at the intake, the velocity of the air increasing as it approaches the inlet or eye of the fan. This condition is produced by means of a tapered intake of large area at its base.

9. The intake hood should be tapered and the intake should cover a deck area of not less than six hundred square inches.

10. The intake should be centered and placed at a forward position on the deck. On most machines this location would be over the beater.

11. If straw, grain, or other heavy material is thrown upward into the fan intake by the beater or cylinder of the separator, it will be necessary to place a deflection plate or baffle board, preferably metallic, under the intake at an angle of approximately 30° with the deck.

12. The absence of sharp, abrupt curves or bends in the intake and connecting parts is most important. Elbows of all piping should have an ample sweep or radius. If possible, no turn in an air pipe should be made with a radius of less than twice the pipe diameter.

13. The least possible obstruction should be offered by the fan equipment to the deck and to the interior of the machine through the deck doors.

14. The fan discharge should be conducted through a metal pipe to the rear of the separator; thence by a canvas tube into the base of the straw stack. Such an arrangement greatly reduces the wind dissemination of, and subsequent soil infestation by, smut spores which otherwise would be blown into the air.

15. If two or more discharge pipes are united, the cross-sectional area of the final common pipe should be approximately equal to the combined cross-sectional area of the original pipes. Otherwise the efficiency of the fan is greatly impaired.

During the past few years various threshing machine companies have manufactured and installed, at the suggestion of the United States Department of Agriculture, special fan equipment on numerous machines operating principally in the Pacific Northwest. Investigations have been conducted at these machines to determine the effectiveness of, and to make every possible improvement in, the different fan installations. A number of the most effective and satisfactory types of these fans are shown and discussed in the following.

1. A single-inlet fan, having a diameter of thirty inches and a peripheral width of six inches (outside dimensions), installed on a 32x54 inch separator (Fig. 1). This fan is admirably driven directly from the cylinder shaft at a speed of 1,000 revolutions a minute, and the whole equipment is well constructed and rigidly attached to the separator frame.

The two intakes, one over the cylinder, the other above and just back of the beater, should be noted. A metal deflection plate placed directly under the front intake, at

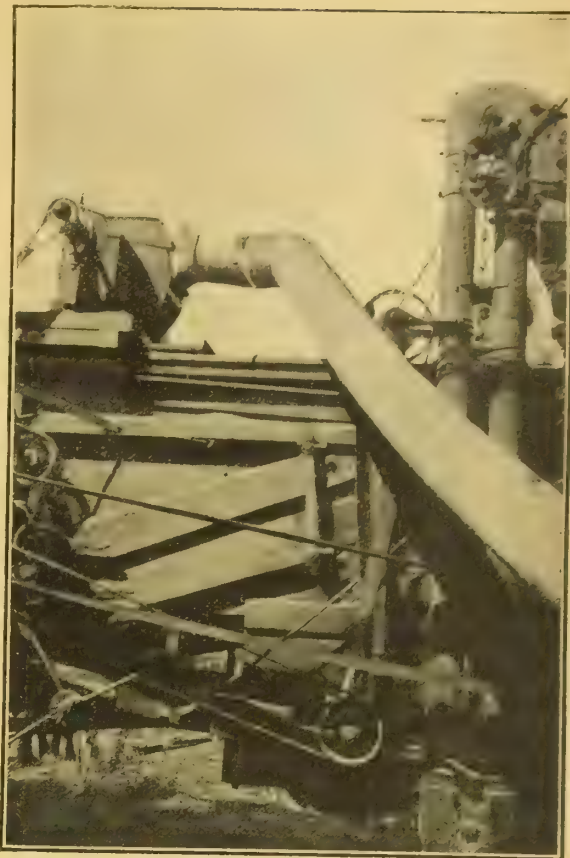


Fig. 10. A Remodeled Box-Type Fan.

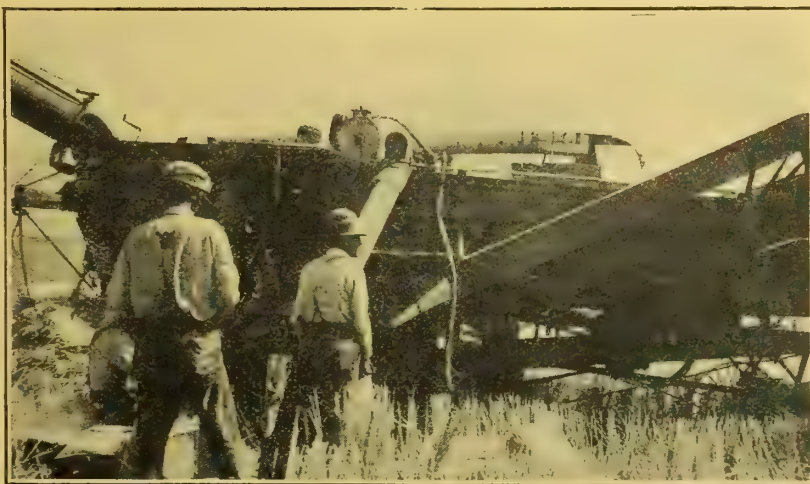


Fig. 8. The Fan Shaft Has Been Shortened.

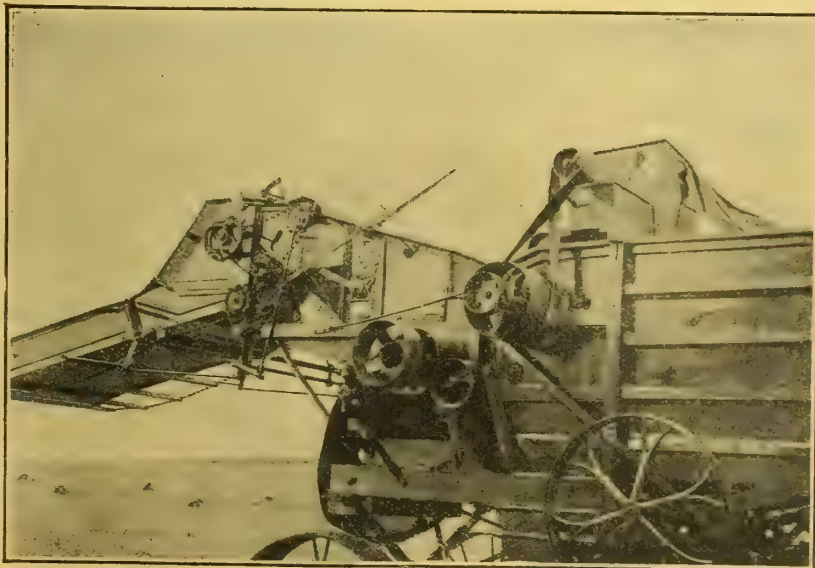


Fig. 9. Note the Idle Pulley. It Starts and Stops the Fan.

(Continued on page 61.)

The Stacker Harvester

By ARCHER P. WHALLON

THE farmers of a not very distant future—my guess is less than three decades from now—will wonder greatly at the point of view of their fathers who allowed their ripened crops to be overtaken, damaged, and often ruined by unfavorable weather. The hay and grain crops of the future will be harvested in safety from rain, and by methods, not only the maximum in safety, but the minimum in labor.

The combined harvester-thresher is the machine giving an absolute minimum in harvest labor expense, but there are territories where the crop cannot as yet, and probably never can be, handled by these machines. The climate may prevent the uniform ripening of the crop, and a serious loss might occur if the crop was left standing in the field long enough for it to get into condition for harvesting with a "combine." But midway between the combined harvester and the common binder method, in point of convenience, crop

safety and labor saving, is a new type of harvesting machine just coming into use—the stacker-harvester or the harvester-stacker, it matters but little which way you say it. These machines do away with the binder twine expense, the labor of shocking and stacking, and enable the farmer to harvest his crop in safety as far as damage from the weather is concerned. There are five devices that may with some latitude of classification be included in this list. All of them are as yet in use but in a small way, and one is a foreign product. The American Northwest, North Dakota and Montana, is the land of nativity to two of the most promising of these inventions whose basic idea is in close agreement.

The best known machine of the class is probably the Graham-Roach harvester-stacker, the invention of David M. Graham, a practical farmer of North Dakota. The Graham-Roach harvester-stacker, to quote the manufacturer's description, "con-

sists of a large box-like arrangement mounted upon two main wheels, with a small caster-wheel in front to take all the weight from the necks of the horses and prevent the machine from tipping backward and forward. This stacker is attached to any eight-foot harvester from which has been removed the binder head and all its accessory parts, leaving nothing but the reel, sickle, and harvester frame. The old elevator is replaced by a new elevator of sufficient length to permit the grain to be elevated directly into the stacker. This elevator has an automatic buncher at the top which receives the grain from the elevator and delivers it in bunches to the stacker. Three horses easily pull the harvester when thus lightened by the removal of the binder parts, while two pull the stacker. The main axle of the stacker is connected by a piece of piping with a flexible coupling, to the harvester frame near the bull wheel axle, thus preventing the two machines from

drawing apart, while the horses are all driven abreast by the driver, who is seated upon the harvester.

"Now let us start to cut a field of wheat. The sickle takes in a full eight-foot swath of grain. The reel lays the grain upon the platform canvas which in turn conveys it to the elevator, which carries it up to the buncher and the buncher automatically delivers it to the stacker in bunches just large enough to make a nice forkful. The operator in the stacker receives these bunches and lays them about in the stacker with the heads pointing toward the middle of the stack which he is building. He keeps the center high just as if he were building the stack on the ground instead of machine.

"When he has the stack completed, he steps onto a footboard on the front of the machine and, by shifting a lever, the front ends of the walls of the stacker are moved outward and the rear gate is released, thus re-

(Continued on page 54.)

Rapid Ditching

By WM. H. VANDERBILT

I LEARNED of a method of blasting ditches several years ago since which time I have been very successful in handling work of that kind.

The accompanying views will give a very good general idea of what blasted ditches look like. These were all shot with sixty per cent straight dynamite by what is commonly known as the propagated method. That means they were

blasted through saturated soil and that it was possible to load a long line of holes, firing them all by con-



View No. 2.

cussion from a detonator in the center hole.

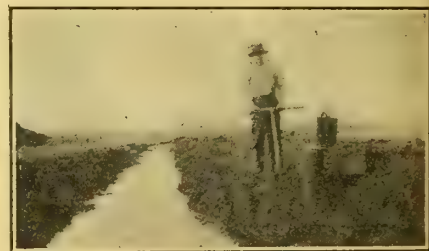
Ditching in soil of this character is very speedily and easily done because what ordinarily takes the most time when blasting a ditch is putting down the bore holes. This can be done in soft mud, however, with an ordinary pointed hardwood stick. It is easily possible to put down a hole a minute and as the holes are generally spaced about one and one-half feet apart, it can be readily seen that fast progress is made under these conditions.

View No. 1 shows a section of the ditch. The longest section shot at one time on this job was four hundred and eighty feet in length. Three

men were able to load the charges on this section in three hours and forty-five minutes.

The last section, which was four hundred and twenty feet in length, was loaded and blasted by two men in an hour and fifteen minutes. One man started at each end of the section and worked toward the center.

View No. 2 shows a ditch blasted through a rough swamp. It was shot by loading a bound of sixty per cent straight dynamite to each yard of ditch. To get the line of holes straight, a line was run down the center of the proposed ditch and attached to stakes. I find it very important to get the line of holes straight.



View No. 4.

The ditch shown in view No. 3 was blasted with one-fourth pound of sixty per cent straight dynamite placed in shallow bore holes eighteen inches apart. This was very economical ditching but the method is entirely satisfactory if a shallow ditch is desired.

The ditch shown in No. 4 was blasted through a salt marsh, the object being to eliminate a mosquito breeding place. It was blasted by using a pound of sixty per cent straight N. G. dynamite loaded in bore holes twenty-four inches apart.

The proper distance between bore holes is best determined by making five-hole test shots. The rule is that the softer and more saturated the ground happens to be, the greater may be the distance between holes, and the consequence, the smaller the cost of the operation.

The test shots should by all means be made, because it should be the blaster's object to get the greatest amount of excavation with the least amount of dynamite. It will readily be understood that the cost of a ditching job is much less if it can be blasted with holes spaced twenty-four inches apart than if they must be only fifteen or eighteen inches.



View No. 1.



View No. 3.

TEXACO GAS ENGINE OIL



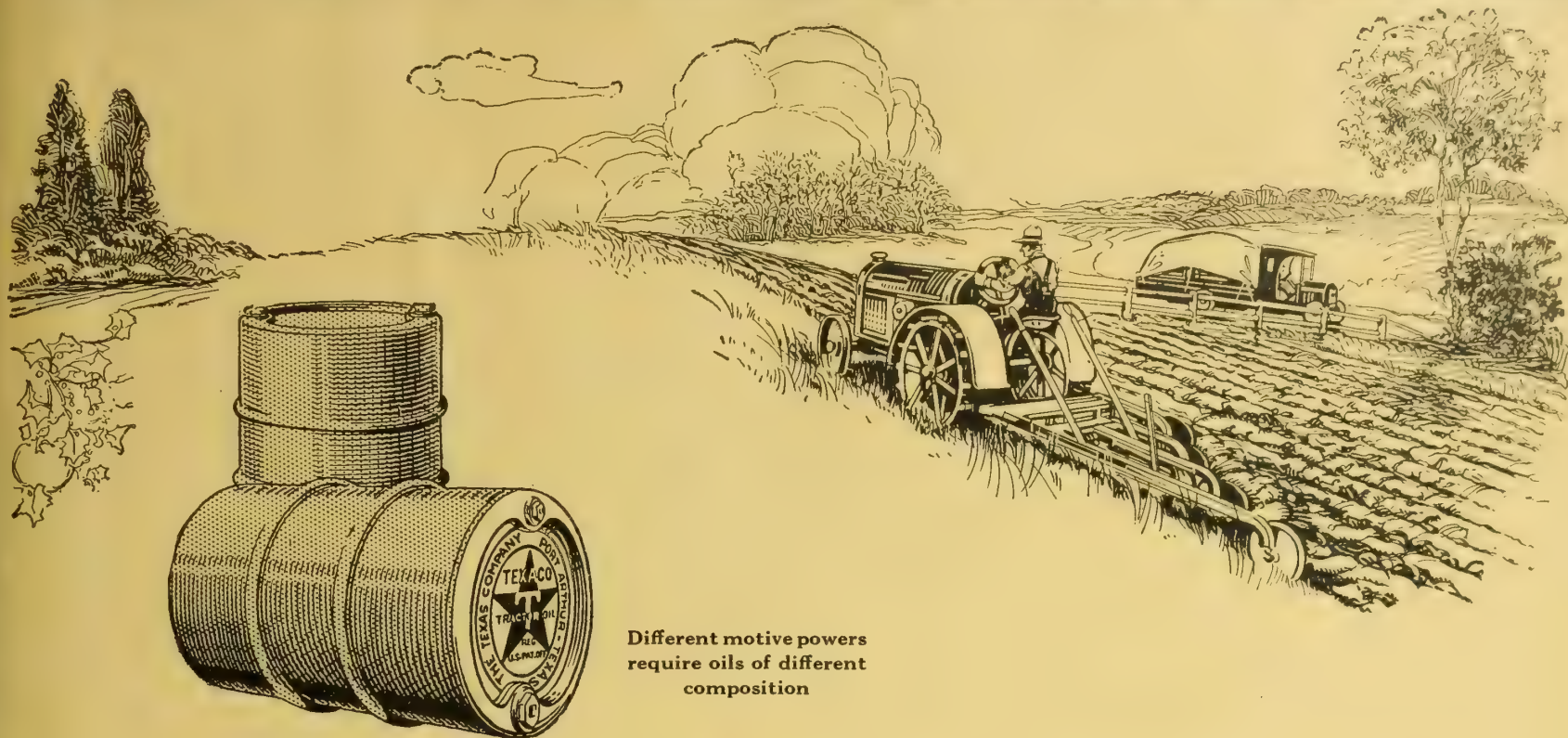
THUBAN COMPOUND



HARVESTER OIL



AXLE GREASE



Different motive powers
require oils of different
composition

TEXACO

TRACTOR OIL



Texaco Motor Oil

The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



Are you using the same oil in your tractor as you use in your automobile or truck?

Compare the work done: The average auto motor carries a relatively light load with many periods of rest. The tractor motor develops its full-rated power with wide-open throttle the whole day long. Higher explosion temperatures and higher pressures must be dealt with. A heavier and more substantial oil must be used.

TEXACO TRACTOR OIL

meets the conditions perfectly. It does the work without excessive thinning down. It burns clean—without excessive carbon deposits. It withstands the greatest pressures. It reduces wear. It means more power.

It comes in 33 and 55 gallon well-built steel drums, wooden barrels and half-barrels, and five-gallon cans. Try it. You'll see a difference right away. You'll find it mighty cheap compared to replacing worn parts or frequent repairing.

THE TEXAS COMPANY

Petroleum and Its Products

CHICAGO NEW YORK HOUSTON
OFFICES IN PRINCIPAL CITIES

"There is a Texaco Lubricant for Every Purpose"

CORD TYPE TIRES Puncture Proof Inner Tube 8000 MILE GUARANTEE

We are introducing a new reconstructed, reinforced cord type anti-skid tire in one design only. Perfectly moulded with live snappy rubber and all tires are true and uniform (not sawed or second). These carry the usual guarantee, and in addition as an appreciation of your first order we will include with every tire one standard tube, FREE. Every car owner should send for a trial order. They give by far the most miles per dollar spent and add attraction to every car.

DURABLE TIRE & RUBBER CO.
Dept. 116 2431 W. Chicago Ave. Chicago, Ill.

Newly Invented SAW RIG

Low introductory offer puts this new saw-rig within reach of all, at small part of cost of other rigs. Saws your winter's wood in few hours. Powerful 4-cycle motor. Easy to operate, light to move. 30 days' trial to prove our claims. 10-year guarantee. Send today for FREE BOOK of FACTS.

OTTAWA MFG. CO., 102 Main St., Ottawa, Kans.



Healthy Vegetables

The U. S. Department of Agriculture recommends that you rid your seeds and soil of infection before planting by using

FORMALDEHYDE
"The Farmer's Friend"

Prevents potato scab and black-leg diseases that attack beets and other vegetables. Guards against onion rot, smut and smudges and cucumber root rot. Prevents mould in celery and lettuce, parsnips and other covered seeds when applied to the beds before planting. Buy Formaldehyde—of the Perth Amboy Chemical Works' Laboratories—at your dealer. Big book giving full directions for scientific seed treatment, free upon request.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK 2



Threshermen's Wagon Tank

Note Carefully Its Construction

The only wagon tank which rocks on front bolster to prevent twisting of tank. Others looking like this are imitators of our work. Over 8,000 sold in eight years, and without complaint. A card to us brings you full particulars of the best wagon tank made. Get our big list of agents who say so. Below we give a few agents.

PIONEER MFG. CO.
Box 110 Middlebury, Ind.

AGENTS

Port Huron Engine & Thresher Co., Port Huron, Mich.
Southwestern Port Huron Co., Peoria, Ill., and Wichita, Kans.
Port Huron Machinery Co., Des Moines, Ia.
Port Huron Machinery Co., Minneapolis, Minn.
Kenney Machinery Co., Indianapolis, Ind.
Sachse & Bunn Co., Cherokee, Ia., and Sioux City, Iowa.
Wichita Supply Co., Wichita, Kans.
Quick & Thomas Co., Auburn, N. Y.

Listen To Me

CLOCK watchers hardly ever become bank presidents.

NEVER hunt trouble, just meet it. The collision is usually enough to satisfy most men.

GIVE a liar time and he will furnish his own rope, gallows, and do his own hanging.

A JACK of all trades is a handy fellow, but he seldom rides in a private car, mostly on the "bumpers."

THE moocher who is always yelling hard times, generally has hard times all the time. He is too busy to even see prosperity.

SOME people nurse sorrow and kick joy out in the cold. You can tell them from the fact that their nose and chin would make a nut cracker.

GIVE so that when the searchlight is turned on you, you don't have to flinch.

LET your business deals with your fellowmen be such that you won't have to duck around the corner when you see the other fellow coming.

YOU may fool the public, but you can't fool your conscience. Guilty consciences cause lots of insomnia.

GIRLS, watch them. If they are kind and considerate to old people you can take a chance, but if they are not, you had better "lay off" them for you may get one that you may have to put a spider in his coffee.

GET the idea out of your system that the world was created for your sole benefit. Be willing to "split" with the other fellow and see how good you feel.

IF the same effort was made in saving a part of your income as is made in spending all of it, you would be making out income tax blanks instead of dodging the merchants.

WHEN you feel blue and it seems to you that the whole world has it in for you, just give yourself the "once over," and dollars to doughnuts you will find it's you.

BY ruling with kindness instead of with an iron fist, you not only have the love and respect of those under you, but you also don't have to worry about being knifed in the back.

LISTEN, brother, unless you have lived so that your "lights shone before all men" you had better keep out of politics. Otherwise, buy hip boots and manure forks.

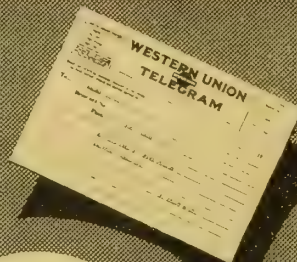
THIS eternal triangle and affinity game that is being played now is harder to beat than a royal flush. The old gal that stayed with me when I was down and out is still good enough to finish the race with.

BO, when a fellow comes to you with a lot of bunk about your high standing and influence, just send out an S. O. S. for lightning rods for she is sure going to hit close. His hole card is the joker.

YOU'VE all heard of the guy who can do anything anyone else can. Six bits to a dog button he is at present out of a job. It is a man's one job to do anything and do it right, and you will be too busy to lose the time advertising your greatness.

A great many people put John D. Rockefeller on the "pan" because he is worth an enormous amount of money, but it makes betting good that your Uncle John as a young man didn't smoke fifty cent cigars and light them with ten dollar bills. Think it over.

THE war gave us an opportunity to show the world what we can do when we all pull together. We were happy even if we were unhappy, because we felt we were giving the best that was in us. If we could do it in time of war, why not in time of peace? Kick out the disturbers and settle all honest differences, man to man, and everybody will be better off and happier for it. You will find your employer human if you treat him human.



Send us your Order by Night Telegram at Our Expense.

25 Pounds Balcy-lene, \$4.50. Express or Parcel Post, C. O. D. Charges Prepaid. Quick Delivery.

You need it now. It gives that feeling of comfort and security about the rig that makes you smile.

Balcy-lene—the world's greatest hard oil—made from Pennsylvania steam cylinder oil, lard and tallow.

Nothing like it on the market. Just what you have been looking for. Used by 5000 threshermen.

Goes to the spot and stays put.

For use in all kinds of compression cups on high speed or low speed bearings.

If you have never used this remarkable hard oil you owe it to yourself and to the outfit to try it now.

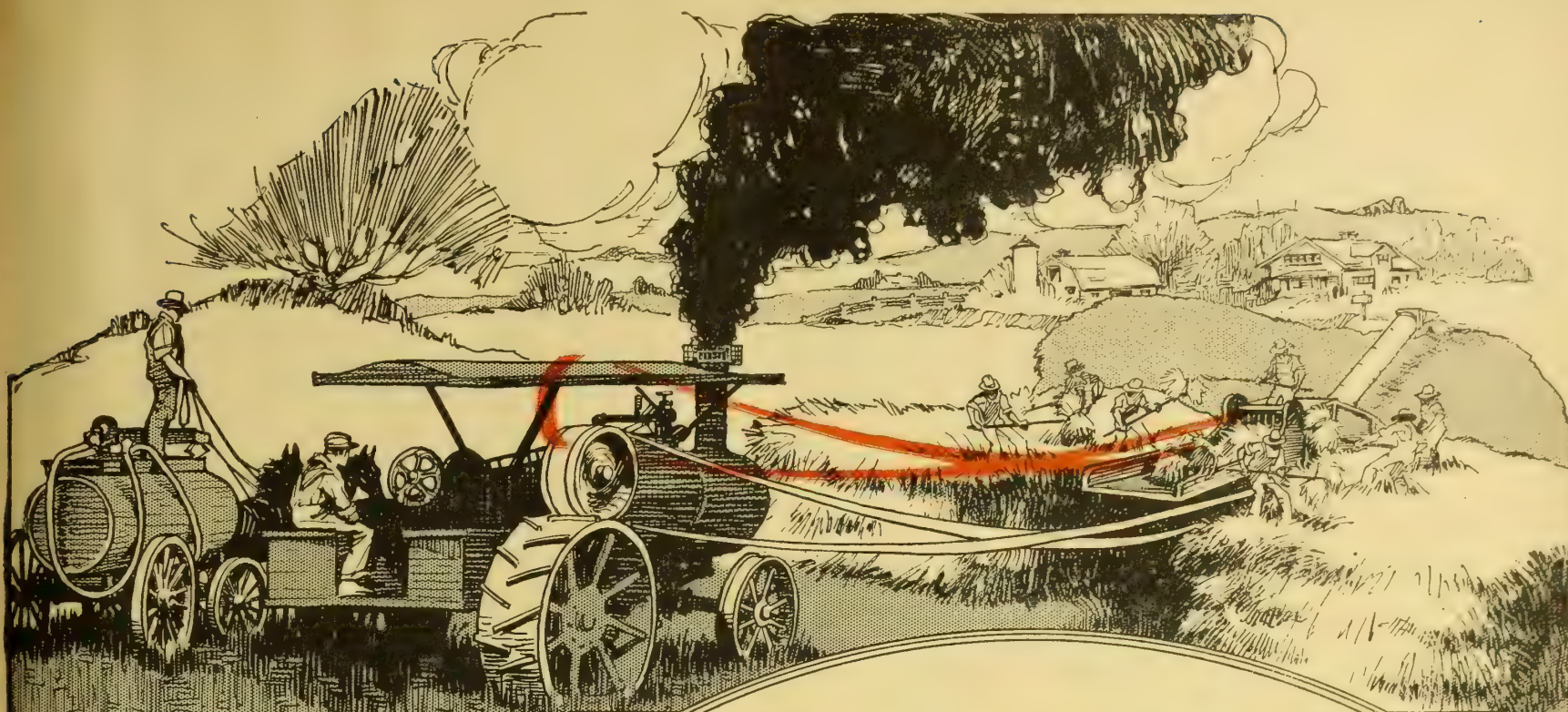
Remember, it costs you no more than ordinary grease.

When you read this, step to your telephone and send us a night message collect order. Shipment will be sent out the day your message is received.

Address

BALSO OIL COMPANY
Toledo Ohio
or Council Bluffs, Iowa

BALCYLENE
THE WORLD'S
GREATEST
HARD OIL



Sawyer Belts

Handle Emergency Loads

EVEN with the most careful feeding occasional choking will occur. *Stitched Canvas Belting* best withstands the shock—handles the emergency load easily.

During heavy threshing the main drive belt must stand constant wear and sudden strain. If it's a Sawyer Stitched Canvas Belt it has the reserve strength to meet the need.

Among big threshermen for thirty years "Sawyer" has meant dependability under all conditions. Moisture and extreme heat or cold do not harm the Sawyer Belt. Its edges do not fray from cross-rubbing—the special reinforcement stitching prevents that!

When you need a reliable belt without delay ask for the genuine *Sawyer Stitched Canvas Belt* stamped with the "U. S." seal.

Good dealers everywhere carry Sawyer Belts and Sabeco Belt Dressing (liberal sample packed with each Sawyer Belt), also the full line of U. S. packing, hose, rubber belting, etc.

United States Rubber Company



Standard for
over 30 Years

SAWYER TRADE MARK *Endless stitched canvas Belts*
REGISTERED

The American Thresherman and Farm Power

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FRANK M. CLARKE, Associate Editor

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A PAGE WITH THE EDITOR

DON'T forget when threshing as well as when selling at the elevator that sixty pounds of wheat make a bushel.

THE time to do things is right now, and not tomorrow, not forgetting that old adage, "Eat, drink and be merry today for tomorrow you may die."

WE hope that by constant admonition the road officials after a while will get the idea that public highways are for those who build them, as well as for the "joy-riders." Tractors and traction engines help make it possible to build roads, and without these we couldn't have bread, much less good roads.

WE deeply regret losing one of our fellow workers for so many years, Mr. J. C. Rogers of our Chicago office. The health of his family necessitates that he locate in southern California, whither the good will and best wishes of every member of our staff will follow him. Honest, faithful and upright "Rogers," we'll all miss you.

A LIABILITY insurance policy is as much of a thresherman's outfit as his tool-kit, or any part of his machine. Accidents are liable to happen and they do happen to almost every operator of machinery, and whether the laws of your state require you to carry liability insurance or not, do it for your own protection, and if an employee gets injured, let the insurance company make good the damages. Otherwise you may be called on to pay heavy damages. Anybody who is injured is entitled to this consideration.

WHAT this country needs right now is a ripping up of the treason stained scoundrels who are trying to bring on a revolution, and to begin using a firing squad at sunrise for a while. These government overthrowing walking delegates who are honeycombing the country and stirring up sedition should be given a "joy-ride" to eternity just as fast as they are apprehended, and proofs of their guilt established, whether they be mayors of cities, governors of states or whatnot. The time to call a halt on these sedition stirring outlaws is at hand.

MAKE settlements as you go and save friends and shoe-leather both.

If you thresh by the bag, be sure and weigh the bags.

A STITCH in time saves nine applies to thresher belts as well as overalls.

AND the "fifteenth point" is to elect Warren G. Harding of Ohio President.

THE world owes us all a living and the world is good for all its debts, but let us do our part as collectors and the price will be forthcoming.

AN extra door or two in your new machinery shed may save you many an hour's labor. Don't forget that sometime you may want a machine from the middle of the shed.

WHEN anybody asks you to thresh their grain for less than a good fair profit, remind them of the days when threshermen were considered as gypsies, and tell them that you are not the fortune-telling man.

THE rich clay lands of northern Wisconsin, Michigan and Minnesota, when improved, make the best dairy lands in the world. Of course, you have to clear these up before you can hope for concrete roads, big barns and silos, brethren.

THERE is a political job of threshing to do this fall in which every machine owner is interested. What we need more than all else is to have the government run upon business principles and not by theorists and sore-heads. The last eight years should be a lesson to everybody.

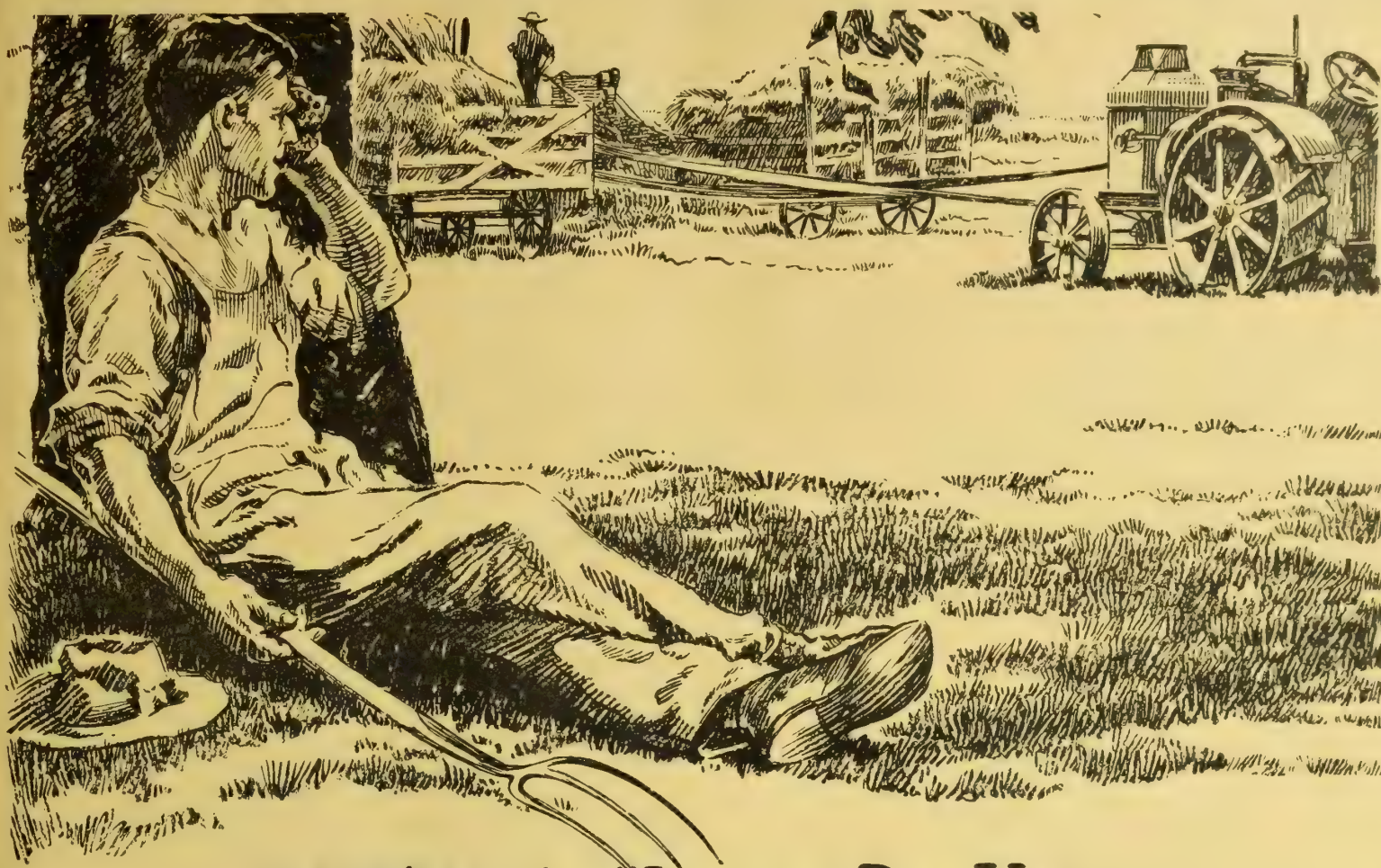
SORTER keep the fact in mind, while heading your traction engine straight on down the public highway, that most of those so-called "missionaries" from across the pond who come to these shores claiming to be raising money for helping the needy back home, are themselves the "needy," and we who contribute to them are the "suckers." When they come whinnying around you, tell them the story of the "lark and the farmer."

THE opinion of many who are well versed in the organization work of threshermen is that if state conventions were held in the fall instead of in the winter and early spring there would be a better attendance. What do our readers think of this idea?

WHAT seems more out of joint than the "Fourteen points" of Woodrow Wilson, is the fact that a farm newspaper publisher, residing in the great state of Iowa and obtaining his bread and meat almost entirely from Republican patronage, has allowed his own political education to be so sadly neglected as to cause him to be a Democrat. Of a truth, "Meredith is the man!"

If the price of threshing machinery is double what it used to be a few years ago, what about the price of threshing? Has it advanced in proportion? It used to be hard sledding to make our payments, but if the price of threshing is charged in proportion to the advance in the price of wheat and other grain, then it should not be a very hard matter to "keep up with Lizzie."

THERE will be steam tractors and big threshing machines just as long as there will be gas tractors and small threshing machines. You just set this down as a fact as fixed as the laws of the Medes and Persians, which altereth not. Just because a man buys a small tractor does not follow that he wants to go into the threshing business. Let the thresherman render the very best possible service, both in promptness and quality of work, and you won't hear much about these "one-armed Johns" in the threshing game. In localities where crops are small the little threshing outfits are all right, but when you begin to talk about threshing the grain crops of the nation with these "toy machines," the slack in the governor belt needs taking up. It's too much like eating soup with a splinter. What would a farmer owning a section of grain think of a man with a twenty-four-inch cylinder thresher trying to do the job? While we all consider the little tractor one of the greatest inventions of the age, let's not try to break prairie sod with ponies.



"WHEW! the Hottest Day Yet — But That OilPull Never Overheats!"

You marvel at the singular cooling capacity possessed by the Rumely OilPull tractor—by its ability to work to its maximum on the hottest day with never a sign of overheating.

You wonder why other tractors have not attained equal cooling effectiveness—yet it is all very simple—the OilPull is cooled with oil—others use water. It is made possible by the exclusive OilPull cooling system

Fill the OilPull cooling system *once a season*—not several times a day. The addition of about a gallon of 15-cent oil is all that is needed. While water rusts the radiator, oil preserves the metal parts. Water leaves a troublesome deposit—oil does not. Oil requires no draining on cold days and will not freeze even at 40° below zero—you know the bother of

water cooling in cold weather. Oil will not boil on the hottest day.

In the OilPull the motor exhaust, piped into the top of the radiator stack, pulls the current of cooling air up through the radiator. Naturally, the heavier the exhaust the greater the cooling effect, therefore, *the harder the OilPull pulls, the cooler it runs.* Just the opposite with water cooling.

The OilPull is not only oil cooling, but it is oil burning, and it is the only tractor with which is given a written guarantee to burn kerosene under all conditions at all loads up to its full rated horsepower.

And the OilPull possesses many other just as sterling qualities that are described in OilPull literature which we will be glad to send you.

ADVANCE-RUMELY THRESHER COMPANY, Inc.
La Porte, Indiana

29 Branch Offices and Warehouses

ADVANCE RUMELY



DIXON

Graphite Lubricants

A Grain of Sound Advice

YOU have the tractor. Now keep it always young and active. Steer clear of the junk heap.

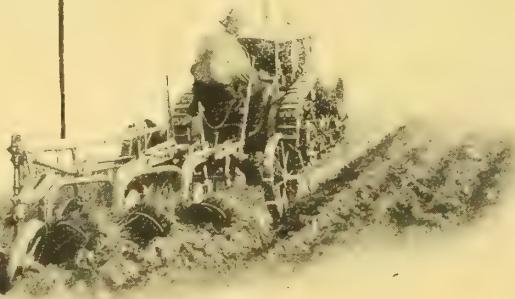
Don't be stingy with lubricants. Give it enough. And don't keep switching from one kind to another.

Buy and use Dixon's Graphite Lubricants, because of the better service you'll get. It's a good name to know and stick to.

Dixon's make a lubricant exactly fitted for your tractor. In fact, the complete Dixon line covers every lubrication requirement for automobile, truck, steam and gas tractor.

Write for interesting free booklet, "Tractioneer's Guide to Good Lubrication."

JOSEPH DIXON CRUCIBLE COMPANY
Department 22G Jersey City, N. J.



Organization

Summer Meetings in New York

The fourth annual midsummer meeting of the New York Brotherhood of Threshermen was held July 2 and 3, 1920, at the factory of Quick & Thomas, Auburn, New York. The summer meeting was started as an experiment but has steadily grown until it equals the annual convention in numbers and interest. The threshermen of New York State now feel that they can afford to leave their work at any time of the year to attend meetings. In fact, they realize that they cannot afford to stay away. More than this, the business has grown profitable enough so that our boys have car fare and money to pay their hotel bill, which at one

and can get anything he wants from this end of the line.

The trials and tribulations of the insurance proposition were explained by Harry P. Kellogg who has done so much explaining along this line that he is getting used to it. However, he assured the boys of better things in future.

L. A. Clarke also assisted in the explanation and corroborated Mr. Kellogg's statement of relief in the near future.

J. B. Parker, of The American Thresherman and Farm Power always interesting, talked to the boys on thresher organization. Mr. Parker, a life member of our organization by unanimous vote, needs no intro-



The Fourth Annual Midsummer Meeting of the New York Brotherhood of Threshermen Was a Huge Success, as Is Shown by This Picture of Those Present.

time would have been doubtful in many cases. The meeting was called to order on Saturday, July 3, by George Bennett, president of Cayuga County. S. B. Simmons, secretary of Cayuga County acted as secretary. Mr. Quick gave the boys a hearty welcome, after which Mr. Shetland of The Auburn Chamber of Commerce gave the address of welcome in behalf of the city of Auburn.

State President Slocum then took charge of the meetings and introduced Mr. M. S. Smallwood, of The Wyoming Valley Fire Insurance Company, which is writing the fire insurance for members of the organization. Mr. Smallwood explained the insurance in detail and also touched on many other subjects of interest in a manner pleasing to all.

Mr. H. P. Kellogg then introduced Mr. W. H. Newsom, national president, who talked on fire insurance, compensation insurance, thresher organization and various other subjects and as usual did justice to them all; in fact, he made a hit with the New York threshermen

duction and can make his home in New York state whenever he wishes.

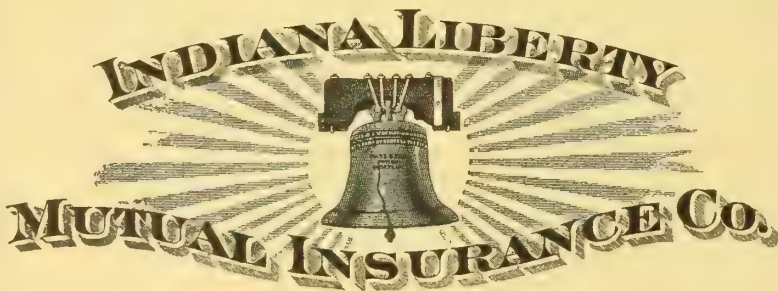
Mr. Fryor, assistant manager of J. I. Case Company's Syracuse branch, gave a very interesting talk giving encouragement to the boys in many ways.

Mayor Burkhart of Auburn gave a short address and everybody felt sure that they were welcome to Auburn.

The meeting was at this time interrupted by Mrs. Quick, who announced dinner. Mrs. Quick is fast becoming popular as a cateress and with her assistants always seems to have plenty for all who come.

A photograph of the crowd was taken and the afternoon session was called to order by State President Slocum.

George Bathrick, of the Nichols & Shepard Company, gave a talk on doing business so as to show a profit. This kind of talk seemed to interest everybody and should do so. Mr. Bathrick went deeply into the subject and gave the boys something to think over. Mr. Carpenter



You Can Be Proud of This Name on Your Compensation Insurance Policy

What Other Name Would Mean That Profits Are Returned To You?

Many states compel threshermen to operate under the Workmen's Compensation Law, while others leave it optional whether they operate under the Workmen's Compensation Law or Common Law. The amount of their liability to employees is reduced by operating under the Workmen's Compensation Act. No law suit with big court cost and attorney fees to pay. The law in many states makes the farmer pay for injuries to a thresherman's employee, if the thresherman is not financially able.

Protect your customers. Provide compensation to disabled employees. Operate under the Workmen's Compensation Act and insure in a good Mutual Insurance Company that returns to you the profits. Our company will do all this for you. Here's why you should insure in the Indiana Liberty Mutual Insurance Company.

It has \$10 for each dollar it actually owes.

Its organization has saved its thresher policy holders approximately \$350,000 with an average of approximately \$70 per year per policy.

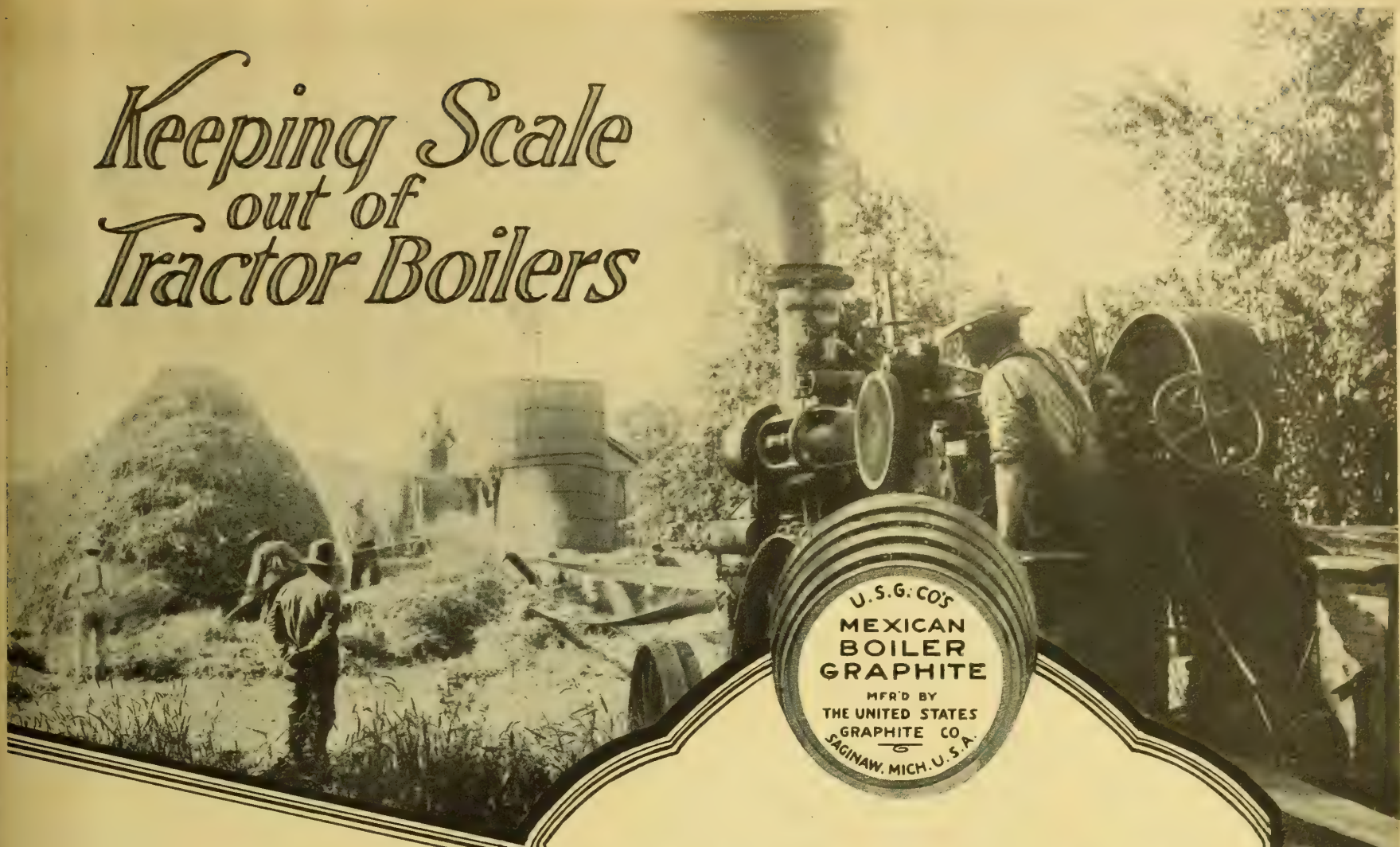
It has the official endorsement of the Threshermen Brotherhoods of Indiana, Illinois and Kentucky.

Now writing insurance in Indiana, Illinois and Kentucky. Kentucky threshermen may write to Joshua Bohannon, 3227 Grand Ave., Louisville, Kentucky.

Illinois Threshermen may write to Davidson & Boyer, 112 South Main Street, Decatur, Illinois, for information.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY
624-25 OCCIDENTAL BUILDING
INDIANAPOLIS, IND.

Keeping Scale out of Tractor Boilers



A Man Size Job

Operators of steam tractors know how easily that crust-like coating known as scale forms in the boiler. They also know how its presence deteriorates the boiler and causes a costly waste of fuel.

Boiler scale is like weeds in the field—hard to keep down. It's a man size job alright. And out of many remedies, U. S. G. Co's Mexican Boiler Graphite alone is competent to tackle it.

There's nothing under the sun that will stop absolutely the accumulation of boiler scale. But it can be prevented from turning into a hard coating.

U. S. G. Co's Mexican Boiler Graphite successfully does that. It completely rids the boiler of old hard scale and acts as a preventative against new formation. And best of all it doesn't injure the boiler.

Want more information? We'll gladly furnish it. Cut this ad out, put your name and post-office address on the margin, mail it to us and we will send you literature and full particulars. Do it know.

OTHER U. S. G. Co. FARM PRODUCTS:

- U. S. G. Co's No. 205 Lubricating Graphite.
- U. S. G. Co's Mexican Graphite Transmission-Differential Lubricant.
- U. S. G. Co's Mexican Graphite Cup Grease.
- U. S. G. Co's Mexican Graphite Journal and Gear Grease.
- U. S. G. Co's Mexican Plumbago Axle Grease.
- U. S. G. Co's Brushes for farm lighting systems.



The United States Graphite Co.
Saginaw, Michigan

BRANCH OFFICES:
New York Philadelphia Pittsburgh Birmingham
Chicago St. Louis Denver San Francisco

Largest Miners of Graphite on this Continent



MEXICAN BOILER GRAPHITE



They all say
it's a wonder
—this auto-
matic "watch
dog"



INVADING the thresher field by the hundreds and hundreds this year, the Automatic Blast Regulator has met with unanimous approval everywhere.

They all say it's a wonder. And they've flooded us with orders away beyond our capacity.

In some instances we were compelled to return orders and money because of inability to make delivery within the specified time. Shortage of raw material and slow transportation were our chief troubles.

But now we are caught up again. Yes, we're on a large scale production in anticipation of a big demand from the northern states and Canada. Deliveries can be made immediately.

THE idea of the Automatic Blast Regulator was hatched in the brain of a practical thresherman. It grew out of a real need for a device that would regulate the air flow to the sieves at all engine speeds.

For an even and steady blast is the very foundation of a good threshing job. Too much or not enough means either a waste of grain or poor cleaning.

Suppose the engine picks up speed perhaps because running a trifle empty. The volume of air immediately goes up, too, and grain is blown over. If through slugging the engine runs abnormally low, then the air flow, being also lowered, is not strong enough to lift the chaff from the grain. Poor work results.

The Automatic Blast Regulator, attached to the fan shaft, will prevent all trouble of this sort. It automatically opens or closes the blast board at the first sign of a change in the pace.

All you have to do is to adjust the blast to the kind of grain you are threshing. This can be done with one finger and can be changed as often as you wish and while the machine is in operation. The indicator will tell you when your machine is running at its right speed.

With the first order from any county we are giving exclusive agency rights for that county, and until there is an agent appointed there we will sell to any one at list price, less the agent's commission, but we want agents—actual machine men who will push our proposition.

We can fit up nearly every make of machine and every size. Send in the form below for particulars and price.

Use This
Coupon /
Mail /
Today /

A. L. LARSON & CO.
Scobey, Montana

I am interested in your Blast
Regulator. Please send me
your proposition.

I operate a _____
_____ machine. Size _____

Name _____

Address _____

of the Goodyear Rubber Company, gave a very stirring address on importance of increased production.

Mr. Jos. Wilkinson, state vice president, made the closing remarks and urged the boys to attend the county meetings. Mr. Wilkinson is also president of Wayne County and a booster all along the line.

A rising vote of thanks was extended to Mr. Newsom, Mr. and Mrs. Quick, and the ladies assisting them, also to the machine representatives.

The weather was fine, the crowd good and nothing marred the pleasures of the meeting.

On July 10, 1920, the Niagara County Brotherhood held their first picnic at Fort Niagara, Youngstown, New York. It was a beautiful day. The meeting was held in a pleasant grove on the shores of Lake Ontario near the old fort where our forefathers held sway with their flint lock muskets to protect and save this country we love so well.

Not of much less importance is the band of threshermen who gathered there on July 10. They must labor that this country may be fed. About fifty were present. The committee in charge left nothing undone for the comfort or pleasure of the guests. A bountiful dinner was served at The Ontario House. A basket picnic had been planned but at the last minute it was discovered that Van Hoyer, chairman of the committee, had no one to pack his basket, consequently the hotel dinner. Van is some guy on looks and behaves fairly well and we would suggest that some Niagara County girl pick him up, as it is still leap year. Get busy, girls, or we will mention him to outside parties. At the dinner a few remarks were made by H. P. Kellogg, Samuel Bates and Charles A. Lissow.

On July 17, 1920, at Silver Lake, the Wyoming County Brotherhood of Threshermen held their first picnic which, for the busy season of the year was very well attended. President Capwell, with a competent force of assistants, looked after the comfort and pleasure of the guests in a very satisfactory manner. An excellent dinner was served from the baskets of the threshermen's wives, after which the children were all treated to a ride on the merry-go-round and a line of sports were indulged in by the older people. State President Harold Slocum seemed to be able to get into overalls quickly, also he is some runner and if he had left his brother Lee at home he might have won out. As it was, Lee got the watermelon. Alfred Bauer can jump some and he easily captured the prize in the fence jumping contest but he had quite a serious accident. He spoiled a first-rate pair of pants and was obliged to face the

audience while some one hurriedly brought him a new pair of overalls.

H. P. KELLOGG.

District Meeting in Massillon

I am a little late in giving the report of the district meeting held at Massillon, Ohio, on June 10, but I presume the old saying, "better late than never," will apply.

The threshermen were welcomed to the city by E. C. Merwin, president of the Russell & Company, who surely did welcome the boys in a nice way. He spoke on the accomplishments of organization, stating that the manufacturers were organized and urged the threshermen of the state to get together and strengthen the Ohio Brotherhood of Threshermen. Mr. Merwin is a good talker and his address was certainly well taken.

Next on the program was an address by the secretary of the Brotherhood, outlining the needs of organization and also the working of the insurance.

Mr. C. M. Drummonds, vice president of the association, gave a lengthy talk on "the morals of the Brotherhood." Mr. Drummonds, being well educated and also a thresherman, can well explain to the threshermen the needs of organization. Mr. Drummonds has always been a booster for the betterment of the threshermen and has spent a great deal of time in the work.

Mr. T. B. Walker of Toledo, Ohio, manager of the Arbuckle-Ryan Company, explained to the boys what had turned up in Monroe, Michigan, and it was seen plainly by Mr. Walker's talk that the county supervisors of Monroe, Michigan, were surprised when they found four or five hundred threshermen and farmers at Monroe on the 21. We regret that we have not more T. B. Walkers in Ohio, because he is a live wire and knows the needs of the threshermen and he is always on the job when it is necessary.

I must not forget that the feed set up to the boys by the Russell & Company was certainly enjoyed by all. I noticed that nearly all of them had to unbuckle their belly-band after they got through with the meal.

The membership received at this meeting was one hundred per cent, and the insurance gotten at this meeting was far beyond our expectations. Arrangements were made to hold a similar meeting at Massillon, Ohio, in 1921.

The secretary of the Brotherhood and also of the Insurance will be at the Ohio state fair grounds during the state fair and will be pleased to meet the threshermen who should attend the fair. You will find us under the tent with the Garden City Feeder Company, who will exhibit at their old stand as usual.

GEORGE DURBAN, Secretary.
Hilliards, Ohio.

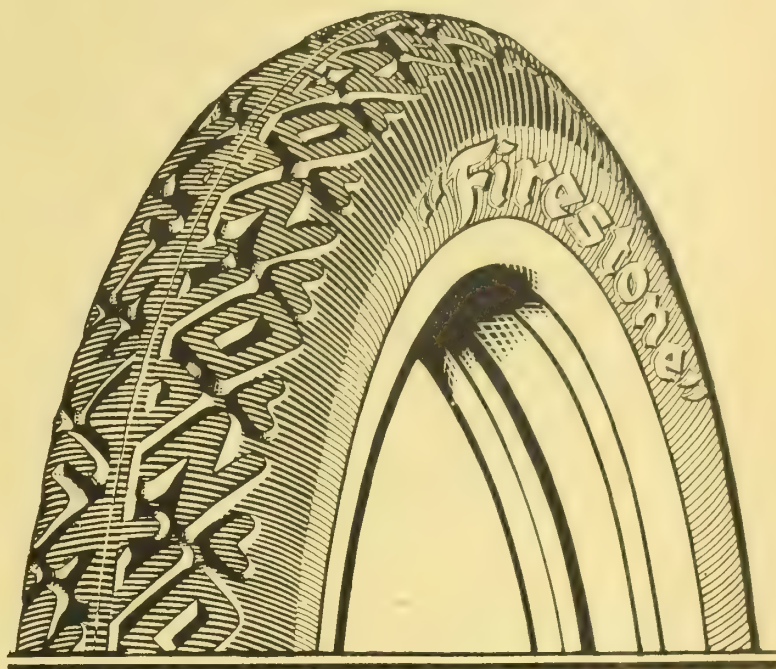
Firestone

LAST year Firestone lifted the 30x3½-inch tire out from all the sizes made and focused attention on it—as the *only tire size capable of quantity production*. And not only the tire user but the whole tire industry responded.

Firestone built an exclusive factory devoted to this size—and worked out a specialized way of manufacturing this tire in quantity—without a backward move—every tire good.

Today—while others are centering on the tire for owners of small cars, the Firestone 3½-inch is out in front with a highly specialized and bed-rock economical method of manufacture.

Firestone is two years ahead because Firestone saw two years ahead—and you owners of light cars get the benefit.

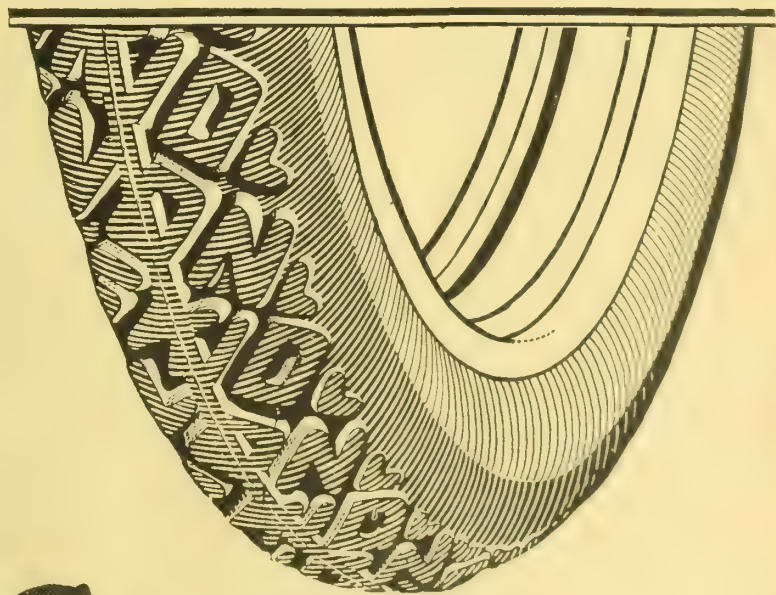


30x3½

(non skid)

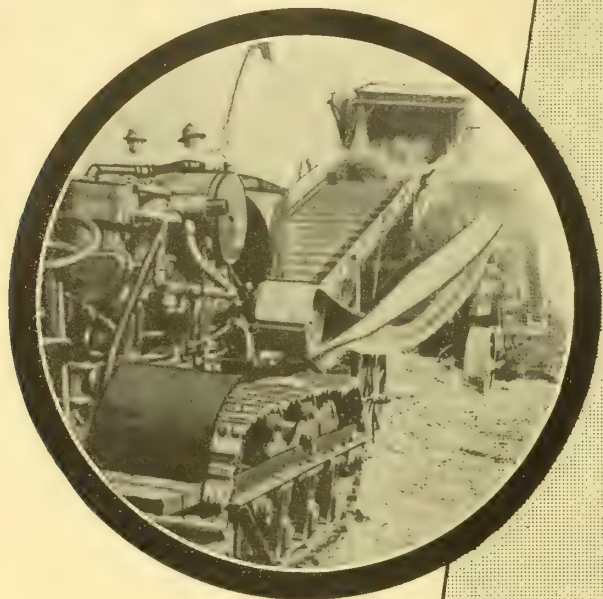
\$22 50

Gray Tube \$3⁷⁵
Red Tube \$4⁵⁰



Most Miles per Dollar

Put Hettricks To work



YOU wouldn't hamper your good automobile with a quartette of poor tires. You know it doesn't pay.

Now, then, why not pursue the same policy in your belt buying? Certainly, belt service and tire service are equally strenuous—equally important.

Top off your outfit with Hettrick Canvas Belts. They're tough, strongly reinforced against wear, built to fit hard farm work. And they're always uniform in their good quality.

Every size for every purpose.

Hettrick Mfg. Company
Toledo, Ohio

Hettrick Canvas Belts

Aunt Malinda

WHEN I was a little girl I used to hear folks say, "If you want to catch a bird, put salt on its tail." This never appealed to me in my childhood because I knew that you couldn't get close enough to use the salt shaker. There are so many texts and "parallelograms" that sound fine in the abstract but don't prove title to the property, that you've got to allow for hem and shrinkage. Now, I've a can or a jar, or whatever you may call it, of table salt in my cupboard on which there's this paraphrase: "When it rains it pours." It's true that when it rains sometimes it pours, but when the rain pours outside the salt doesn't run out of the shaker worth a cent unless you dry it and mix grains of rice with the salt.

Well, this wasn't the object of my text. What I was about to say was that it doesn't matter what your game is, if you use the proper persuader and clothe it in the right kind of habiliments (if that's the word), you'll land your fish.

Some of you are acquainted with the fact that with his many other long and shortcomin's, Silas is a kind of a self constituted gatherer of tribute for the Volunteers of America in Madison, and by reason of this fact lots of people call him "Bishop," while the "gang" with which he trails, from Charley Doring to Bill Campbell, call him "Bish," when they want to "pick his flint" and get a spark in return.

Well, every year the Volunteers give a picnic to the little children of Madison, from Wingra Park to the "Catfish" and from Lake Mendota to Lake Monona. They feed and water from three thousand to four thousand children and have a real day's outing in Tenney Park, which dear old Dan Tenney, one of Silas's main supports in his lifetime, gave to the city of Madison before he went to heaven. While "Old Dan" had his own views of religion he was the best "meal ticket" in town for the poor.

Well, in these days of profiteering it takes money to finance a feed for from three to four thousand hungry youngsters for noon and night, and Silas's part of the program is to gather in the "usufruct."

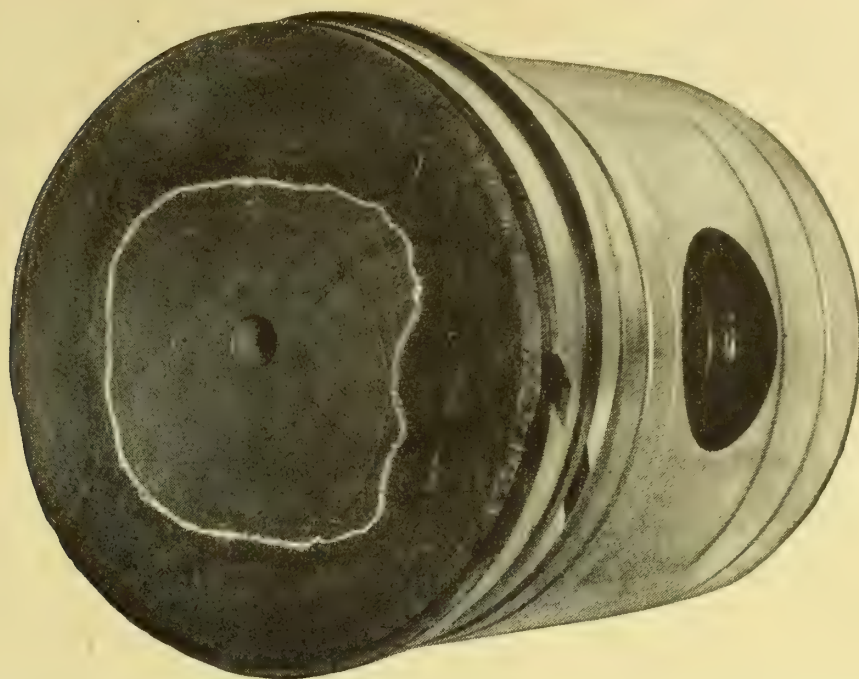
Now you know that it ain't any Sunday School picnic touchin' folks for a thousand dollars these hard times, along with a heathen box or a charity ball on every corner of the street, so I used to wonder where Silas'd find the ammunition but I don't worry any more.

T'other day before he left for Portland to wear a red cap and make a monkey of himself, along with seventy-five thousand others, Silas wrote his "picnic call" to the faithful and sent out a thousand letters, headin' 'em with a couple of texts from the Scriptures, one bein' the account of the five loaves and two fishes and the other about "sufferin' little children to come unto Me," and he dressed the rest of the letter down in his own scripture and called for a "show-down." Bless my soul, if they didn't fairly rain money on him and some of the most beautiful sentiments accompanin' checks for five dollars, ten dollars, and as much as twenty-five dollars, was the answer of the good Christian men and women of Madison in what Silas calls "seinin' the pond." Silas had put salt on the birds' tails good and proper and the birds seemed to like it. Listen! It doesn't matter much what you say just so your heart is right and you strike the right cord in the human heart. Why, I'll venture that Silas has upbraided some of those givers in years past, for herakes everybody somewhere, sometime, but they all seem to like it. If you'll search the whole human race over and treat 'em as brother and sisters and show 'em that you're tryin' to do good in the world, you'll find friends and supporters everywhere. When I asked Silas how he ever come to undertake this work he says, "Malinda, it's so easy separatin' folks from their money that it looks like a shame to refuse to take it when they loosen up so easy."

"Yes," I says, "that's one explanation, but the real explanation and the truth about it is that you've got to educate folks to take hold and help do these things and they'll thank you all the more when they get once started."

It's the spirit of Him who commanded the multitude of five thousand people to sit down upon the grass and who blessed the loaves and fishes and brake and gave 'em to His disciples and they to the multitude, and of which, when all had partaken, there remained twelve basketfuls. It's the spirit of Him who healed the lepers, who made the blind to see and the lame to walk, and who raised the dead. "If ye have the faith of a grain of mustard seed ye can say unto a mountain, be removed into the sea and it shall be done."

The Christian man or woman who asks God's help in doing good unto others won't have a very hard time gettin' in touch with the "Great Central Telephone Office," where storms do not hinder the messages nor where all things which maketh a lie are forbidden to be used by the operators when they forget your messages. It's the direct current straight from the throne of God that comes whizzin' back and helps to strengthen you and make you a worker in the Lord's vineyard, and thereby you help others to help themselves and to still help others after you've said your little "Now I lay me down to sleep," and somebody else takes your place in the Lord's vineyard.



Photograph of tractor piston showing the central area which over-heats with used oil lubrication and causes pre-ignition, "knock," and less power. Madison-Kipp Fresh Oil Lubrication keeps the entire piston so uniformly cool that this cause of "knock" is prevented.



Preventing Tractor Knocks Caused by "Hot Center" Pre-Ignition

One little-known cause of tractor "knock," due to pre-ignition, is excessive heating of the central area of the piston head.

This "hot-center" is generally caused by used-oil lubrication. Fresh oil lubrication removes it.

With used-oil lubrication a "knock"—and considerable loss of power—develops whenever the motor is called upon to work hard.

This knock is often due to pre-ignition caused by overheated central areas in the piston top—as shown in the photograph reproduced above.

This central area becomes so hot, with used oil lubrication, that it burns away even the used oil that accumulates on it whenever the motor is running light.

This excessive heat is enough to ignite the gas on the compression stroke—at such a time that "knock" and loss of power occur.

When the motor is equipped with a Madison-Kipp Fresh Oil System, the knock disappears and the motor develops more than its rated maximum horse-power—and without any knock whatever.

This advantage of the Madison-Kipp Fresh Oil System is, of course, only one of a number whose benefits have for many years been known to tens of thousands of tractor users.

Others are a saving of fuel frequently averaging 13½%, an increase of power often averaging 15%, and a saving of oil running as high as 83%.

Since Madison-Kipp Fresh Oil Systems are actually a part of the motors they serve, the only way in which the tractor user can secure the savings and freedom from trouble that they provide, is to buy the tractor of the manufacturers who send out their tractors Kipp-Equipt.

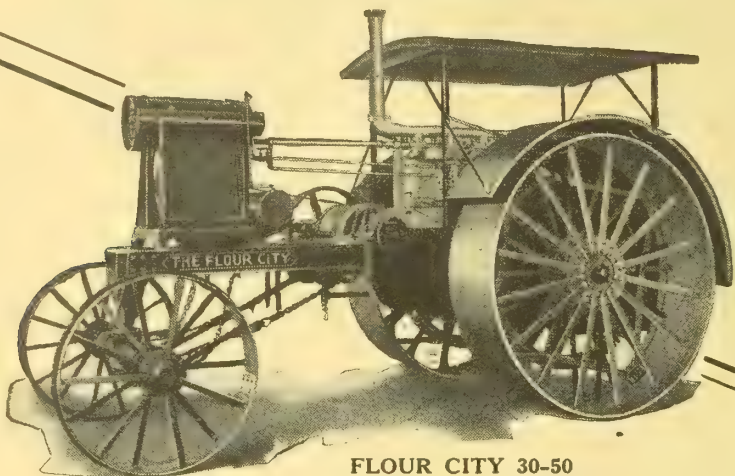
These tractors cost no more and are worth much more.

MADISON-KIPP LUBRICATOR COMPANY
MADISON, WISCONSIN

Madison-Kipp Lubricators



FLOUR CITY TRACTORS



FLOUR CITY 30-50

POWER PLUS

Extra strength and quality in every part give Flour City Tractors the surplus power to handle surplus work. Whatever the conditions, you can count on the Flour City Tractor to see the job through.

Built in four sizes—14-24, 20-35, 30-50 and 40-70. One proven design. Each size equipped with the reliable Flour City valve-in-the-head motor.

Write for Catalog

Kinnard & Sons Mfg. Co.

826 44th Avenue North

Minneapolis, Minn.

Mention The American Thresherman and Farm Power

Correspondence

I commenced running traction engines when I was but fourteen years old. I am now twenty-nine, and have never missed a season since. I have run several makes of engines, and I think that all will do good work if properly repaired and run.

wheat, seven cents for rye, two dollars and twenty-five cents an hour for shredding and seventy cents a hundred for sawing. I have been running the engine for my father since I was big enough to reach the levers. I now have a little son two



Case Outfit Which William Massee, Sheffield, Iowa, Owned and Operated for Four Years.

For four seasons I owned and operated a Case outfit, but I will never want to own another threshing machine. I would rather run an engine for another fellow and let him stand the heavy expenses and do the collecting. I have found that when the threshing season is over with I have more money in my pocket than I ever had while running a machine of my own.

years old who will be a thresherman some day. I am enclosing a picture of our outfit sawing lumber. I am standing on the platform.

The roads and bridges in this section could be greatly improved. We have a few concrete bridges but most of them are wooden ones.

CLARENCE E. KAITZEL.

Dale, Ind.

For six years I ran a Corliss engine. The last two seasons I have run an Avery, which I like very well. I also like the good old farm cooking we get when threshing.

I am enclosing a picture of a Case outfit which I at one time owned.

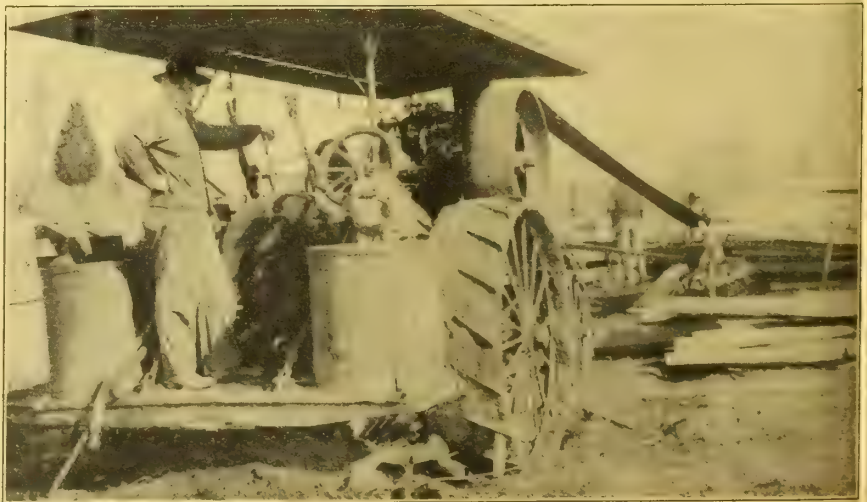
WILLIAM MASSEE.

Sheffield, Ia.

You all may be interested in hearing from one of us down in old Virginia. While we do not thresh on the same scale as in the big wheat states, we do a lot of it. I am now fifty-six, and I began threshing at sixteen, so you can see I have swallowed my share of dust, too.

I sold my rig last fall and thought I was through my threshing days. This July when a man urged me to take charge of his outfit, I couldn't refuse. I find I still love the hum of the cylinder and that I still prefer separator work to engine work, in spite of the dirt I have swallowed. We use a 15-horse power tractor this year, with a small separator.

My father owns and operates a Keck-Gonnerman outfit consisting of an 18-horse power engine and a 30x48 separator. He also has an eight-roll McCormick shredder, a Birdsell clover huller and a Heilman sawmill. Prices for threshing are: four cents for oats, six cents for



Sawing Lumber Near Dale, Indiana, with Clarence E. Kaitzel at the Throttle.

You Can't Beat It at Any Price

It is speed — clean threshing — and economy that count in a separator. And you find these features—developed in the "Humming Bird" than in any other machine available.

It's built by practical threshermen for practical service in threshing—and is more highly recommended by practical threshermen than any other separator.



Reasons Why

This Thresher is so Popular

1. Low operating cost.
2. Ability to handle unusual and difficult grain under all conditions.
3. Durability—stronger and more permanent materials—all steel construction, least repair expense.
4. More modern improvements that save all the grain.
5. Lightness—less power.
6. Simplicity—fewer parts.

They all tell the same story

Wausa, Neb.
Wood Bros. Thresher Co., Des Moines, Iowa.
Gentlemen: I am sending you a kodak picture of my rig, 28x50 Humming Bird. It sure made a hit. My customers were all surprised at the amount of grain it can handle and for its workmanship. On several occasions I have threshed 2,800 bushels of oats in one day, and made an average of nearly 2,100 bushels per day, including oats, barley, rye and wheat. I ran 29 1-2 days and threshed 61,700 bushels. Your belt girdle is perfect. I ran all season and have never run the drive belt off yet. The chaff elevator is a wonder. It is simply troubleless, and the governor on the feeder works perfect. During my whole run I never knew of such a thing as belt trouble.
C. O. ANDERSON.

Fort Ripley, Minn., Route 2, Box 8.
Dear Sir: About my Wood Bros. Humming Bird, 36x58, I bought this year. It is the easiest machine to handle and run I ever saw and I have been threshing for 15 years. I threshed rye that was five feet high and never stopped from seven in the morning until noon and from noon until night. All the farmers are satisfied with my work. I clean the grain all nice and clean. The Humming Bird can't be beat. I threshed thirty-six days and it did not cost me a cent for repairs.
JAS. D. and T. D. DEROSIER.

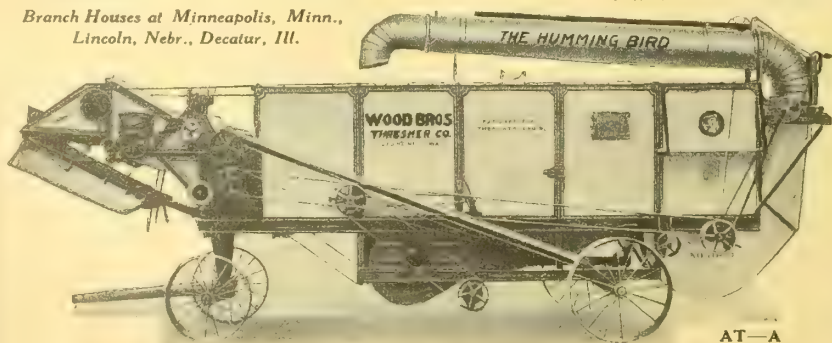
Wood Bros. Thresher Co.

Makers of Separators and Threshing Engines

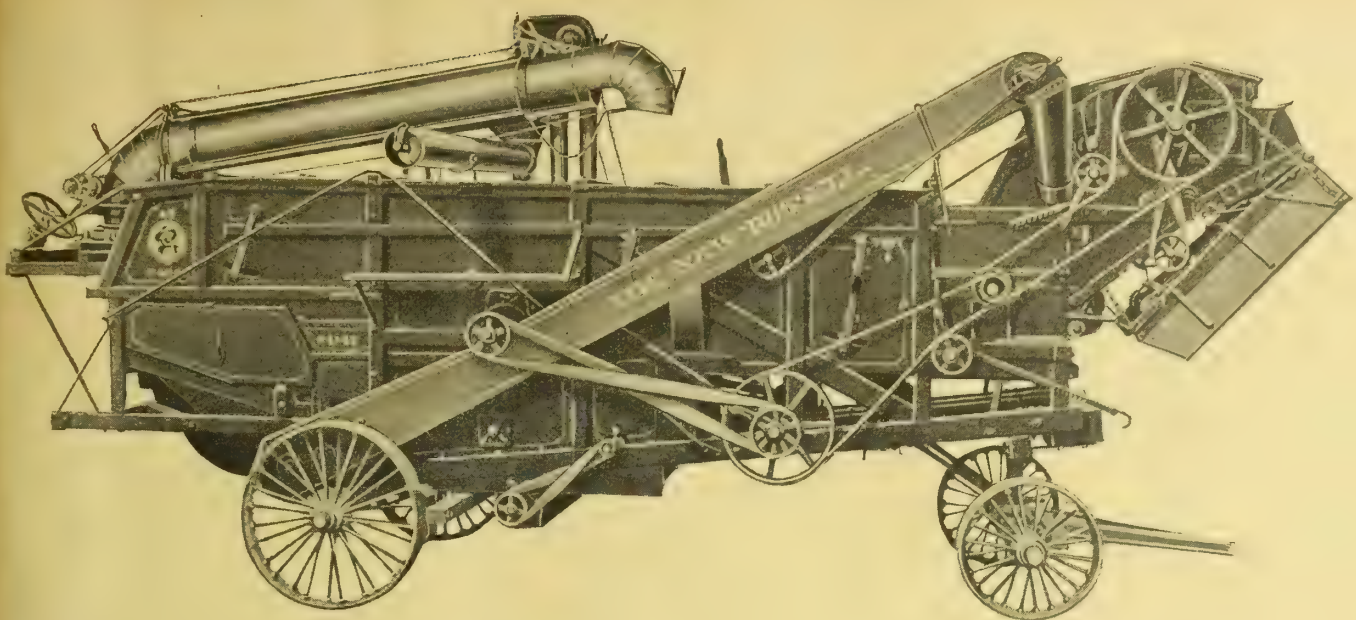
Des Moines

Iowa

Branch Houses at Minneapolis, Minn.,
Lincoln, Nebr., Decatur, Ill.



AT—A



1842
—
1920

Russell Threshers Smash all Records

The A. H. Averill Machinery Co.,
San Jose, Calif.

Willows, Calif., May 4, 1920.

Gentlemen:

Thinking that you would like to know how I like my Russell Separator, after using it for two seasons in the rice fields of this section, I am writing this letter to give to you my experience in threshing rice with the 36x60 New Russell Separator.

My best day's work in threshing rice, 1765 sacks in a field which yielded 17 sacks per acre. As a test of the work of the machine in doing this work at this rate the straw was re-threshed and I obtained 3 sacks of rice.

One job I re-threshed, which was done by the ——— Separator. This separator threshed 8025 sacks of rice. And when the New Russell Separator threshed the straw over again I obtained 1125 sacks, so I feel that the New Russell saves the rice.

For the season's repair bill, five dollars would cover the repair bills. The New Russell stands hard work, and all of my customers are satisfied ones. An average of 999 sacks a day was made for this season's run of 25 days.

Yours truly,
(Signed) S. V. JONES.

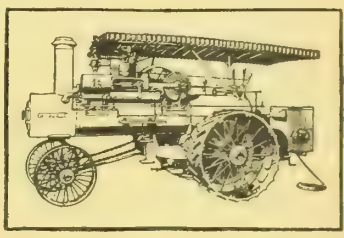
STATE OF CALIFORNIA, } ss.
County of Glenn, }

On this 4th day of May, in the year one thousand nine hundred and twenty, before me, Harlow M. Plimpton, a notary public in and for the County of Glenn, personally appeared S. V. JONES, known to me to be the person whose name is subscribed to the within instrument, and he duly acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the County of Glenn, the day and year in this certificate first above written.

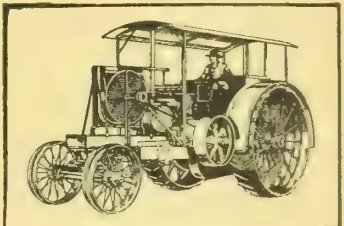
[Seal] (Signed) HARLOW M. PLIMPTON,
Notary Public in and for the
County of Glenn, State of California.

—The RUSSELL got 99.8 per cent of the grain on the first threshing.



Steam Traction Engine

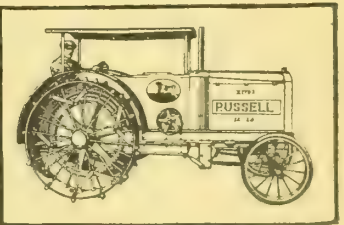
—The RUSSELL salvaged 1125 sacks by re-threshing the straw stack left by a competing thresher in getting out 8025 sacks.



30-60 H. P. Giant

—This was Sui-Hero, the toughest of all rice to thresh.

—Repair bill not over \$5 after a season's threshing of 24,975 sacks.



Made in 12-24, 15-30 and 20-35

Stop and think what an immense total saving this means in dollars and cents during the long life of a Russell!
Send for catalog on the complete line of Russell Kerosene and Steam Tractors and Russell Threshers for Grain, Rice, Seeds, Peas and Beans.

The Russell & Company, Massillon, Ohio

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| Indianapolis..... | The Russell & Co. | Council Bluffs, Ia.. | The Clark Implement Co. | Crowley, La..... | The Massillon Engine & Thresher Co. |
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RUSSELL

THE OLD RELIABLE LINE

Yes Sir-ee!

We made this cigarette to meet your taste!

Camel

CIGARETTES



Camels have everything

any smoker ever had on his mind about an ideal cigarette—wonderful full-bodied mellow-mildness and a flavor as refreshing as it is new and delightful.

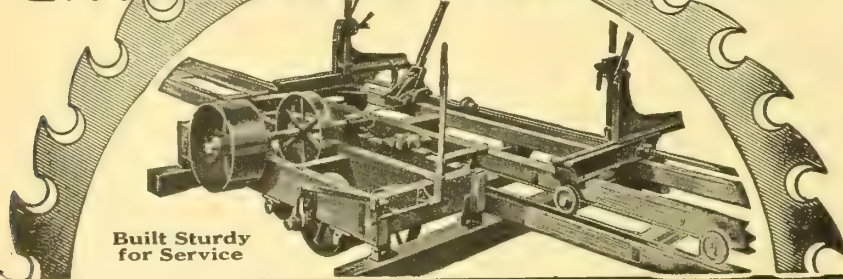
Camels quality and Camels expert blend of choice Turkish and choice Domestic tobaccos win you on merits. Camels blend permits you to smoke as liberally as you like without tiring your taste.

And, you'll make a quick note that Camels leave no unpleasant cigaretty aftertaste nor unpleasant cigaretty odor!

You'll prove our say-so when you compare Camels with any cigarette in the world at any price!

Camels are sold everywhere in scientifically sealed packages of 20 cigarettes for 20 cents; or ten packages (200 cigarettes) in a glassine-paper-covered carton. We strongly recommend this carton for the home or office supply or when you travel.
R. J. Reynolds Tobacco Co.
Winston-Salem, N. C.

ENTERPRISE SAW MILLS.



Built Sturdy for Service

The Eyes of the Nation Looks to OHIO for its Presidents and good SAW MILLS

ENTERPRISE SAW MILLS

are the result of forty years of development. They are correct in design and so simple in construction that any one of average ability can understand and operate them. Built of first class materials and workmanship, and are so STURDY they will give years of hard SERVICE. The more you investigate Saw Mills, the more surely you'll want only an Enterprise. Send for catalog today.

The Enterprise Company, 1050 Main St., Columbiana, Ohio
Eastern and Export Office: 136 Liberty Street, New York, N. Y.
Makers of Saw Mill Machinery

Mention The American Thresherman and Farm Power

I had a funny experience several years ago and wonder if you all ever ran into the same luck. I did a right smart bit of threshing for a big farmer. We worked through the noon hour trying to get the job done, and shut down the machine at three o'clock. We thought, of course, we would then have dinner served, but the farmer looked hurt when we mentioned dinner, and rather than act small ourselves, my men and I pulled out for the next place. At this farm there was a fellow without very much of this world's goods, but who will have a lot in the next world, unless I miss my guess. When he heard from one of my men that we hadn't eaten a bite since six A. M., he had us adjourn to the house, where his good wife got us some cold sliced ham, bread and butter, potatoes and milk. When I shut my eyes, even now, to think of something good to eat, I think of how fine that ham tasted.

After that hasty meal, our crew sailed into that threshing job and when we quit at 8:00 P. M., we had everything threshed.

Next year after that, I was making up my list and you can bet I gave our good friend a place high on the list. About that time, around came our friend who had let us go hungry. I felt pretty sassy and asked him about that trick he had done us. He said he'd look out for us all right this year, but I told him he needn't bother—he might forget us when the long hot days came. He sort of squirmed at this and asked me what I thought a meal for my men had been worth. I said, "Five Dollars," and with that he came across with five iron men. So I relented and did his job for him, and that year he treated us fine.

When I got around to seeing our friend, who is perhaps poor in money but rich in spirit, I slipped him that five dollars. I think he had it coming to him. What do you think about it?

I like The American Thresherman and Farm Power better each month, and as long as my eyes can read type, I want it in our home. I have five children and hope they will make good farmers when they get old enough. My oldest boy has just come back to the farm from city work and I hope other farmers' boys will see how we need them and do the same.

Wishing our Northern and Western threshermen a successful season and Uncle Silas a prosperous year, I am, yours for old Virginia:

GEORGE H. GOULDTHORPE.
Warrenton, Virginia.

For a number of years I have taken your valuable magazine, The American Thresherman and Farm Power, and I have gotten lots of good information out of it.

I am enclosing a photograph of my Minneapolis 24-horse power engine

How to Increase Your Crops And save them from drought EVERY YEAR.

Economical Irrigation by Pumping

THIS BOOK TELLS HOW
Sent Free

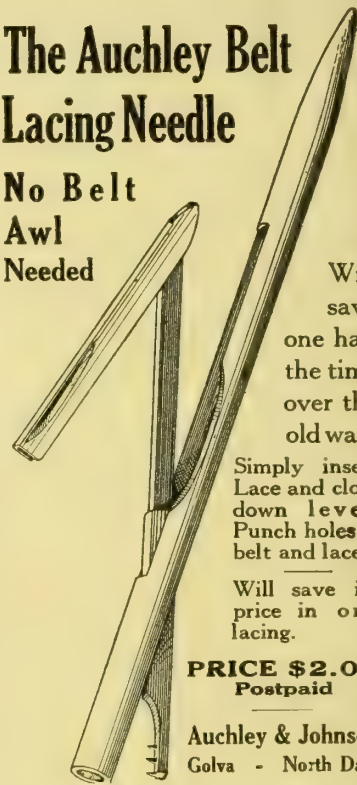
Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures Crops, especially POTATOES.

THE AMERICAN WELL WORKS
General Office & Works: Dept. 12, Aurora, Ill.
Chicago Office: First National Bank Building

Mention The American Thresherman and Farm Power

The Auchley Belt Lacing Needle

No Belt Awl Needed



Will save one half the time over the old way.

Simply insert Lace and close down lever. Punch holes in belt and lace.

Will save its price in one lacing.

PRICE \$2.00
Postpaid

Auchley & Johnson
Golva - North Dak.

Mention The American Thresherman and Farm Power



1000 Percent More Work

That's what lubricant does for hack saw blades.

Look at the chart above. Three identical blades cutting the same piece of stock. Two were run without lubricants and failed in less than five cuts. The third made over fifty cuts and was still cutting when the test was stopped, because it was flooded with lubricant.

This chart and many others are shown in the new Starrett book, "Hack Saws and Their Use." Write for a free copy and for Catalog No. 21 "AM."

The L. S. Starrett Company
The World's Greatest Toolmakers
Mfrs. of Hack Saws Unexcelled
ATHOL, MASS.

Use Starrett Hack Saws

42-65

Mention The American Thresherman and Farm Power



Herbert D. Perry, Falls Creek, Pennsylvania, Threshing Wheat in Pratt County, Kansas.

with Canadian type boiler and my New Russell separator. Threshing in this part of the country is fairly good. We are not bothered with price cutters. My average run is about forty days.

JOHN SCHAFER.

Hoven, S. D.

I noticed in the "Thresherman" Mr. Byrd asked for a solution of his troubles in threshing Turkey wheat. We thresh nothing but Turkey and Hybrid here and it is dry and the straw grinds up very badly. The sieves have to carry almost all of the load.

I have no trouble with my 32x54 Case separator in Turkey wheat. We can handle about fifteen hundred bushels a day and do a first-class job. The secret in Turkey wheat is to set the machine three or four inches lower at rear end or even more if it takes more to give a good circulation, and run it at normal speed. Running with low speed and machine low in front causes grain and chaff to pile up on grain pan and go onto the chaffer in wads. It also overloads the grain pan, making the vibrator belt slip and in extreme cases the grain and chaff will come out of the front end of the grain pan and fall on the front axle. We let her down at the rear until circulation on the grain pan is good and there is less chaff and grain in the machine at one time. Running with a high rear is like trying

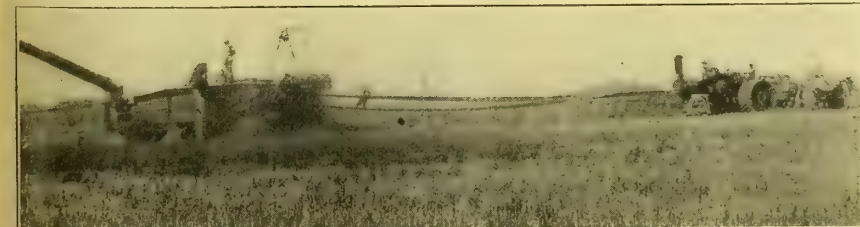
you a picture of my 20-horse power Case engine and 32x54 Case separator with Spokane feeder. I presume this is much different from Eastern rigs, but it is interesting, and a fine way to handle headed grain from stacks.

D. E. JOHNSON.

The Dalles, Ore.

I see by The American Thresherman and Farm Power that Mark R. Byrd had trouble with his engine when threshing in Turkey Red wheat. If I had the size of his machine I could tell him what changes to make in his machine. Different sized machines have different cylinders.

I have threshed only three falls, but I have watched the machine closely and my experience has been that the best results are obtained when the teeth travel at a certain speed, depending on the kind of grain being threshed. For small grains, such as wheat, oats, barley, etc., a speed at the tips of the teeth of slightly over 6,200 feet per minute has been found to give the best results. If good work is to be expected it is very important that the proper cylinder speed be maintained. If the cylinder speed is too slow the grain will not be properly threshed from the heads and the separating and elevating mechanism will not have sufficient motion to do good work. It is sometimes desirable to vary the cylinder speed with certain kinds of



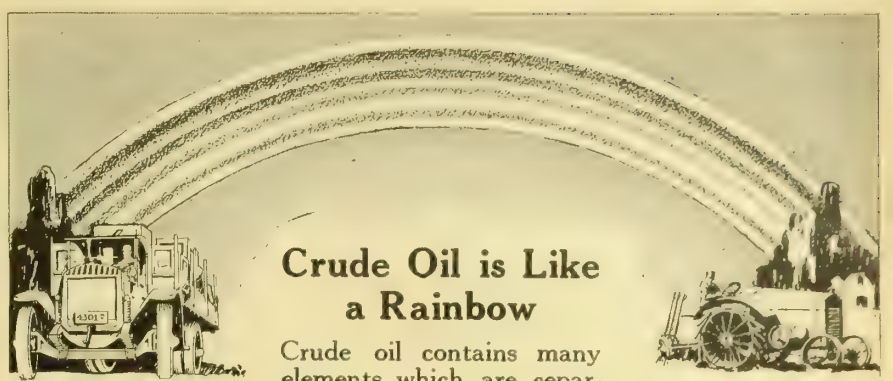
D. E. Johnson's Rig as It Appears Equipped with a Spokane Feeder.

to run water up hill. The cylinder has nothing to do with the separating of the grain but takes it out of the head. Use enough concave but not too much. You can run with lower cylinder speed if you have the rear end low. Lower cylinder speed will not crack the grain so badly.

I have had ten years' experience with Case machines. I own three complete outfits now. I am sending

grain. In tough rye or Turkey wheat, for instance, it is usually better to run the machine somewhat above the normal speed.

Corrugated teeth are made to thresh tough Turkey Red wheat or flax one to six rows in the concaves. When the teeth, either in the cylinder or concaves, become badly worn they should be replaced with new ones, because when the teeth are



Crude Oil is Like a Rainbow

Crude oil contains many elements which are separated by distillation. Distillation is boiling a liquid until it evaporates, then condensing the vapors. The elements of crude oil are so completely blended that it is as difficult to separate them as to separate the blended colors of the rainbow. To get complete separation through repeated distillations we make countless tests of a most delicate and scientific nature. These tests are made almost hourly during the 23 days of the refining period. Only in this way can the absolute purity of oil products be insured.

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The secret of successful scientific oil refining is painstaking care and unceasing vigilance. In making En-ar-co oils we average over a million tests a year. It is only by this multiplying of tests that perfect products can be made. This thoroughness in our scientific refining processes is the protection we offer to users of our products.

Why En-ar-co Motor Oil is Better

All refiners make lubricants, just as all cooks can make biscuits, yet there is as much difference in oils as there is between the delicious light, flaky biscuits mother makes and the heavy, soggy apologies for biscuits most restaurants serve. In each case the raw materials are practically the same, but the "making" is different.

"The Oil of a Million Tests" is not merely a slogan. It is an actual fact. From the time we produce the crude oil (by test) to the end of the 23-day refining process it is tested almost hourly, and every refining test is checked by scientific laboratory tests.

To protect and safeguard your motor, use En-ar-co Motor Oil in your auto, truck or tractor. It contains no sediment-forming impurities. It is always uniform in excellence.

EN-AR-CO AUTO GAME FREE

Here is a fascinating game in which autos compete in a cross country race. Two, three or four can play. Only one game to a family.

Get this game for the children

Grown folks, too, will like it. Sent free only to auto or tractor owners, to acquaint you with the merits of EN-AR-CO MOTOR OIL. USE COUPON.



The National Refining Co.,
2119 Rose Building,
Cleveland, Ohio. Date

Enclosed find 2-cent stamp to partially cover postage and packing. Please send EN-AR-CO game free. I have never received an EN-AR-CO game.

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OF THE
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SUPPLY BOOK

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BELTS—Cash Prices

150 ft.—7 inch—4 ply	\$105.50
150 ft.—8 inch—4 ply	118.50
150 ft.—8 inch—5 ply	148.75
160 ft.—8 inch—5 ply	157.75

KLINGTITE ENDLESS RUBBER BELTS

Klingtite endless rubber belts fill a long felt need for the thresher who demands a belt that will not stretch excessively, shrink, slip or rot when exposed to outdoor and variable climatic conditions.

Klingtite belts will cost you as follows:

100 ft.—6 inch—4 ply	\$77.90
100 ft.—7 inch—4 ply	90.72
125 ft.—6 inch—4 ply	96.42
125 ft.—7 inch—4 ply	113.05
150 ft.—8 inch—5 ply	182.16

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Prices include barrels, half barrels and cans. Full barrels contain 50 gallons or more. Half barrels contain 28 gallons or more.

HURON CYLINDER OIL

This is a clean, dark, heavy-bodied oil, made from high grade Pennsylvania crude, and is particularly adapted for engines carrying high pressure—100 pounds or over. We guarantee satisfaction to the purchaser.

Barrels (50 gals. or more) each	\$22.50
Half barrels (28 gals. or more) each	14.40
10 gallons, jacketed cans, each	5.85

HURON RED ENGINE OIL—Light and Heavy

Is not stringy but an excellent lubricant; particularly in cold weather. Used by us in all of our factories for general lubrication. We guarantee satisfaction to the purchaser.

In ordering state whether light or heavy is wanted.

Barrels (50 gals. or more) each	\$19.80
Half barrels (28 gals. or more) each	12.60
10 gallons, jacketed cans, each	5.18

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Warranted as suitable for highest speeds in thresher, saw mill and other similar machinery in heaviest bearings, open boxes and compression cups. Will not gum or corrode, free from grit and made from purest lubricating oils. A high grade oil at a very reasonable price. We guarantee satisfaction.

NO. 3 MEDIUM HARD FOR GENERAL USE

In barrels and half barrels, per lb.	\$0.11-7/10
25 lb. pails, each	\$4.05
10 lb. cans, each	2.03

HURON AXLE GREASE

This is a good, clean, light colored grease, suitable for axles, gears, etc., not for machinery journals. We guarantee satisfaction to the purchaser.

In barrels and half barrels, per lb.	\$0.07-2/10
100 lb. keg or four 25 lb. kits, \$8.10	25 lb. wood kit, each 2.25
50 lb. keg or two 25 lb. kits, \$4.28	10 lb. wood kit, each 1.13

SAWYER CYLINDER TOOTH WRENCH

Something new. Positive gear drive. The gears in this wrench are steel and machine cut. No ratchets to wear out. This wrench will give more speed and leverage than the ordinary kind as it is very powerful and yet is easy to operate.

Price each \$7.65

Be sure to give size of nut to be used on and whether square or hex.

CLIPPER BELT LACERS—Every Thresherman Needs One

The "Clipper" Belt Lacer No. 3 is a 24-pound machine which can be carried to the belt and permits the lacing to be done without removing the belt from the shaft.

A belt 6 inches wide can be laced at one operation. If the belt is wider than six inches, the operation is repeated—if narrower, the standard card of hooks is cut to the proper length.

No. 3 Belt Lacer, each \$25.00

The "Baby Clipper" No. 0—4 inch is a small lacer which can be used in connection with an ordinary vise. The hooks are inserted and held in place the same as with the No. 3 Lacer. As the jaws of the vise are brought together, the hooks are pressed into the squared belt end, and the lacing when completed is identical with that made with the No. 3 Lacer. No. 0 "Baby" Belt Lacer, each \$6.50

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Company, Ltd.
Lincoln, Nebraska

Port Huron Mach'y
Company, Ltd.
Minneapolis, Minn.

Port Huron Engine &
Thresher Co.
Wichita, Kansas

worn it affects the threshing quality as well as retards the work of the machine. When putting new teeth in the cylinder, be very careful not to get the cylinder out of balance. On account of the high speed at which cylinders run, they must be accurately balanced.

I hope some of these pointers will help M. R. B. so that he can thresh "Turkey" without any trouble.

GERALD E. STEVENS.

Poplar, Mont.

My brother and I have been in the threshing game for the last sixteen years and have owned several different kinds of rigs. At present we have a 30-horse power Case steam engine and 24x42 Huber separator. We also have a sawmill.

In this part of Kentucky the jobs are small as most of the farmers are in the dairy business and only raise small crops of grain. Our prices are: ten cents for wheat; six cents for oats and eleven cents for rye. The farmer furnishes the coal and boards the four men.

I have been in the blacksmith and wood working business for the past twenty years and have a good trade. My shop is about two miles from town. We buy good tough oak trees and, having our own sawmill, we cut it into whatever we want, so when we put out a farm implement it will stand the test.

I have three gasoline engines in my shop, a 5, a 2½-and a 1½-horse

power, and with all kinds of wood working machinery, business moves along rapidly.

FRED JOHNS.

Butler, Ky.

I am sending you a picture of our home-made tractor. We made this tractor from a Cartercar engine,



James Tuma, Elba, Nebraska, Standing by His Home-Made Tractor.

Buick gears, and Knickerbocker wheels. Last summer I plowed with it, pulling a Moline disc gang. We also use it for cutting wood, cutting corn and running the corn sheller. We also have a threshing outfit con-

sisting of a Wood Brothers' engine and Nichols & Shepard separator. Last fall we had a long run, but the wheat did not turn out very good, only averaging four to twenty bushels to the acre. I tended the

separator, my father the engine, and my brother hauled water.

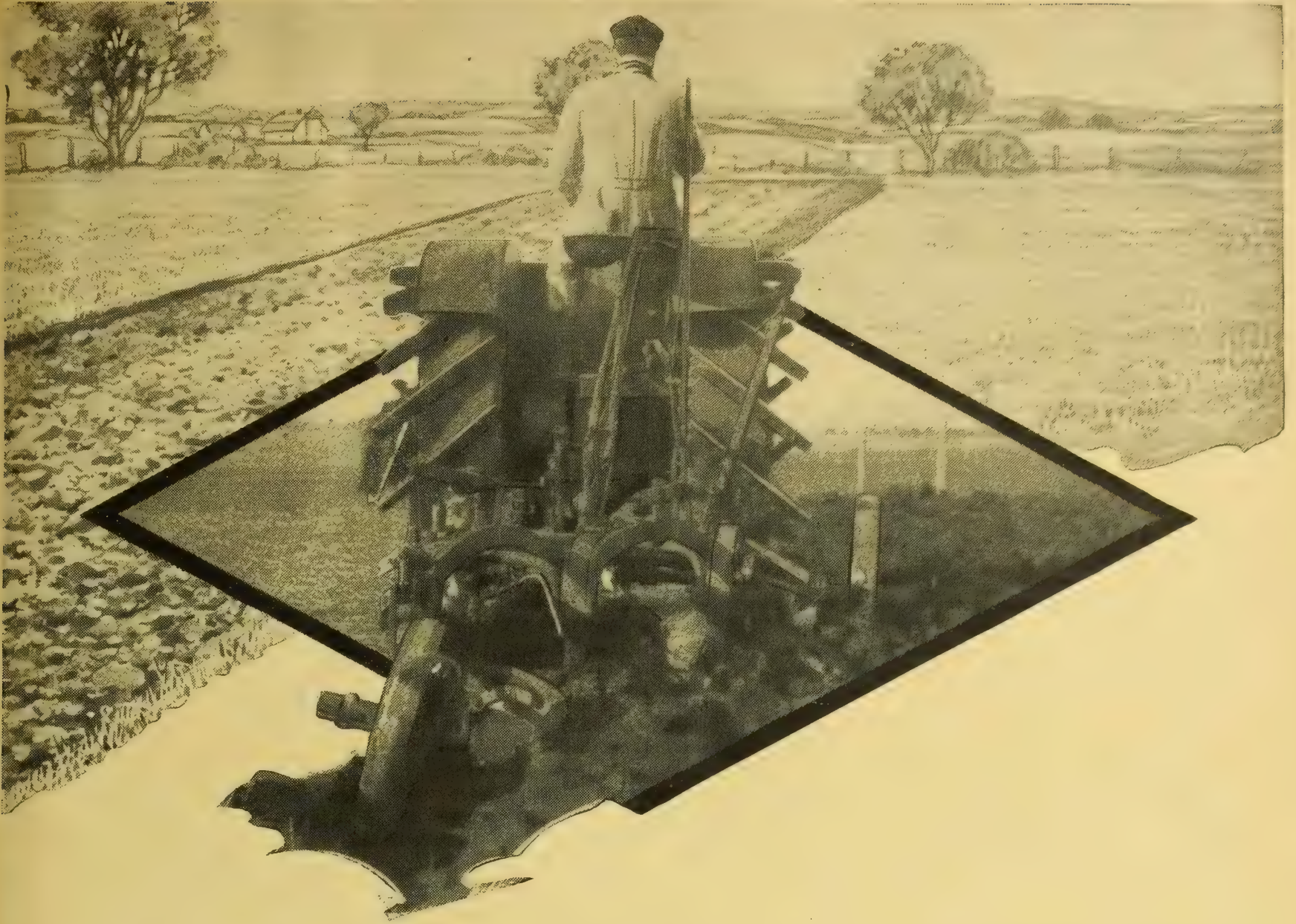
Elba, Nebr.

JAMES TUMA.

A motor will occasionally refuse to fire for no reason that is apparent.

Prominent Fairs, 1920

ALABAMA, Alabama State Fair, Birmingham, Oct. 4-9	J. L. Dent
CALIFORNIA, California State Fair, Sacramento, Sept. 4-12	Chas. W. Paine
COLORADO, Colorado State Fair, Pueblo, Sept. 19-25	J. L. Beaman
COLORADO, National Western Stock Show, Denver, Jan., 1921	Fred P. Johnson
CONNECTICUT, Connecticut State Fair, Hartford, Sept. 6-10	Will P. Landon
GEORGIA, Georgia State Fair, Macon, Oct. 28-Nov. 6	Harry C. Robert
GEORGIA, Southeastern Fair Association, Atlanta, Oct. 16-26	R. M. Striplin
IDAHO, State Fair of Idaho, Boise, Sept. 21-25	O. P. Hendershot
ILLINOIS, Indiana State Fair, Danville, Aug. 29-Sept. 4	Geo. M. McCray
ILLINOIS, Illinois State Fair, Springfield, Aug. 20-28	B. M. Davidson
ILLINOIS, Kankakee Inter-State Fair, Kankakee, Aug. 24-28	Len Small
ILLINOIS, National Dairy Show, Chicago, Oct. 7-16	W. E. Skinner
INDIANA, Indiana State Fair, Indianapolis, Sept. 6-11	Charles F. Kennedy
IOWA, Iowa State Fair, Des Moines, Aug. 25-Sept. 3	A. R. Corey
IOWA, Inter-State Fair, Sioux City, Iowa, Sept. 19-25	D. V. Moore
KANSAS, Kansas Free Fair, Topeka, Sept. 13-18	Phil Eastman
KANSAS, Kansas State Fair, Hutchinson, Sept. 18-24	A. L. Sponsler
KANSAS, International Wheat Show, Wichita Fair and Exposition, Wichita, Kansas, Oct. 4-16	Henry B. Marks
KENTUCKY, Kentucky State Fair, Louisville, Sept. 7-11	F. T. Kremer
LOUISIANA, Louisiana State Fair, Shreveport, Oct. 28-Nov. 7	W. R. Hirsch
MARYLAND, Great Hagerstown Fair, Hagerstown, Oct. 12-17	J. C. Teed
MASSACHUSETTS, Eastern States Exposition, Springfield, Sept. 19-25	J. C. Simpson
MICHIGAN, Michigan State Fair, Detroit, Sept. 1-6	C. W. Dickinson
MICHIGAN, West Michigan Fair, Grand Rapids, Sept. 20-25	L. A. Lilly
MINNESOTA, Minnesota State Fair, Hamline, Sept. 4-11	T. H. Canfield
MINNESOTA, St. Paul Union Stockyards Co., So. St. Paul, Minn., Sept. 29-30	L. W. Kulee
MISSISSIPPI, Mississippi State Fair, Jackson, Oct. 19-24	Mabel L. Stire
MISSISSIPPI, Mississippi-Alabama Fair, Meridian, Miss., Oct. 11-16	A. H. George
MISSOURI, Missouri State Fair, Sedalia, Aug. 14-21	E. G. Bylander
MONTANA, Midland Empire Fair, Billings, Sept. 21-24	R. H. Cosgrove
MONTANA, Montana State Fair, Helena, Sept. 13-18	Horace P. Ensign
NEBRASKA, Nebraska State Fair, Lincoln, Sept. 5-10	E. R. Danielson
NEW JERSEY, Inter-State Fair, Trenton, Sept. 28-Oct. 2	M. R. Margerum
NEW YORK, New York State Fair, Syracuse, Sept. 13-18	J. D. Ackerman
NEW YORK, Rochester Exposition, Rochester, New York, Sept. 6-11	E. F. Edwards
NORTH DAKOTA, North Dakota State Fair, Grand Forks, July 20-24	Don V. Moore
OHIO, Ohio State Fair, Columbus, Aug. 30-Sept. 4	E. V. Walborn
OHIO, National Farmers' Exposition, Toledo, Ohio, Dec. 2-10	H. V. Buelow
OKLAHOMA, Oklahoma Free State Fair, Muskogee, Oct. 4-9	Ethel M. Simonds
OKLAHOMA, Oklahoma State Fair, Oklahoma City, Sept. 25-Oct. 2	I. S. Mahan
OREGON, Oregon State Fair, Salem, Sept. 21-26	A. H. Lea
OREGON, Pacific International Live Stock Exposition, North Portland, Nov. 17-22	O. M. Plummer
PENNSYLVANIA, The Great Allentown Fair, Allentown, Sept. 20-25	Harry B. Schall
PENNSYLVANIA, Erie Exposition Association, Erie, Aug. 19-24	C. R. Cummins
PENNSYLVANIA, Pennsylvania's York Fair, York, Penn., Oct. 5-8	H. C. Heckert
SOUTH DAKOTA, South Dakota State Fair, Huron, Sept. 13-18	C. M. McIlvaine
TENNESSEE, Chattanooga Inter-State Fair, Chattanooga, Oct. 2-9	Jos. R. Curtis
TENNESSEE, Memphis Tri-State Fair, Memphis, Sept. 25-Oct. 2	Frank D. Fuller
TENNESSEE, Tennessee State Fair, Nashville, Sept. 20-25	J. W. Russwurm
TEXAS, Texas State Fair, Dallas, Oct. 19-24	W. H. Stratton
UTAH, Utah State Fair, Salt Lake City, Oct. 4-9	D. W. Parratt
VERMONT, Vermont State Fair, White River Junction, Sept. 28-Oct. 1	F. L. Davis
VIRGINIA, Virginia State Fair, Richmond, Oct. 4-14	W. G. Saunders
WASHINGTON, Spokane Inter-State Fair, Spokane, Sept. 6-11	J. H. T. Smith
WASHINGTON, Washington State Fair, North Yakima, Sept. 20-25	G. C. Finley
WASHINGTON, Western Royal Live Stock Show, Spokane, Nov. 4-8	W. L. Tennant
WISCONSIN, Wisconsin State Fair, Milwaukee, Aug. 30-Sept. 4	Oliver E. Remy
WYOMING, Wyoming State Fair, Douglas, Wyoming, Sept. 14-17	E. Ewel



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NEVER mind how hard the ground, or how hot the day, an E-B plowing outfit goes right on turning land, as many hours of the day as you want to drive it.

What makes a plowing outfit as dependable as this? No one feature, nor for that matter, a dozen. Only the longest experience, under the widest variety of farming conditions—and then a manufacturing organization big enough and far-sighted enough to utilize all the lessons of that experience.

Sixty-eight years of implement making have taught us what is necessary for dependable service. A manufacturing organization of vast extent builds this knowledge into E-B plowing outfits.

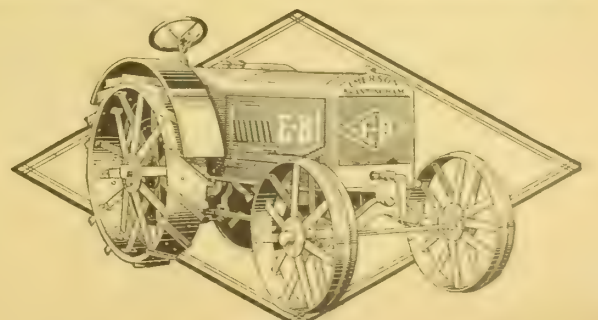
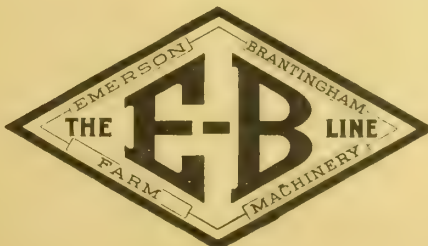
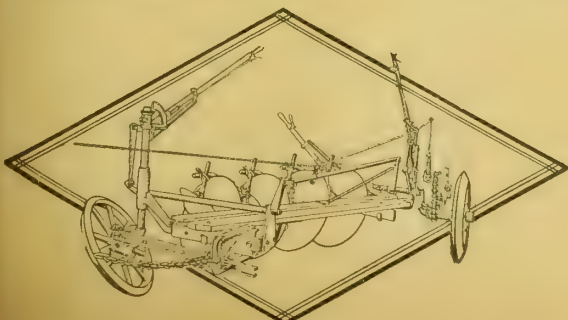
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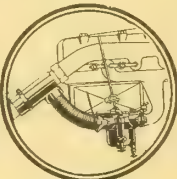
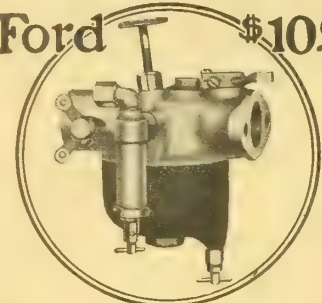
A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company

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Ford \$10.00



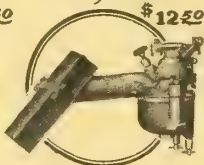
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BYRNE, KINGSTON & COMPANY
KOKOMO, Department K. INDIANA.

Women's Department

The Blue Jay

BY LOUISE DRISCOLL

Villon among the birds is he,
A bold, bright rover, bad and free;
Yet not without such loveliness
As makes the curse upon him less.
If larkspur blossoms were a-wing,
If iris went adventuring,
Or, on some morning, we should see
Heaven bright-blue chicory
Come drifting by, we would forgive
Some little sins, and let them live!

Verlaine among the birds is he,
A creature of iniquity:
And yet, what joy for one who sees
An orchid drifting through the trees!
The bluebell said a naughty word
In mischief, and there was a bird.
The blue sky laughed aloud, and we
Saw wings of lapis lazuli.
So fair a sinner surely wins
A little mercy for his sins.

Fruit As Food

J. S. G.

My brother, the oldest child of our family, is fond of telling that when mother warned him, as a small lad, that he must not eat so many green apples or they would kill him, he went out to the orchard, gathering a hat full of the forbidden fruit and, secreting himself behind the barn, ate all he could possibly swallow, just to see "how it would feel to die!"

I thought of the incident this morning when I read the following from a Government report:

"It is almost universally believed that green fruit is unwholesome and causes serious digestive disturbances, yet those who have been brought up in the country know that if illness had always followed eating it there would have been few well children in the community in the summer. Recognizing that green fruit may be a cause of illness at times and at other times apparently harmless, scientists have recently carried on extensive studies to ascertain the truth of the matter. Chemical analyses were made of fruits of varying degrees of ripeness, and studies in which green fruit was eaten in considerable quantities and under varying conditions were carried on with both animals and men. It appears from the results of the experiments that although unripe fruit is undoubtedly often harmful, particularly for children, the danger from such foods, especially green gooseberries, plums, pears, and apples, when eaten raw, is less than is commonly thought, and the effects depend in marked degree upon individual peculiarities.

"The green fruit was found to contain the same chemical compounds as the ripe fruit, though in different proportions—that is, no chemical element was found in the green fruit which was foreign to the ripe fruit and which could be considered in itself a cause of illness. The injurious effects of raw unripe fruit therefore, it appears, do not depend upon chemical constituents, but rather on the unusual proportions in which the constituents occur, and especially the large percentage of hard cell tissue, which, if imperfectly masticated, it will readily be seen,

might be a source of digestive derangement. Possibly the excess of acid in the green fruit is also a cause of digestive disturbance. Cooked green fruit was found to be practically harmless, being especially palatable and wholesome when cooked with sugar."

Even with this evident explosion of another time-honored tradition of the American household, however, I shall not encourage my children to eat green apples! But fruit in proper condition, in reasonable quantities and at proper seasons they are encouraged to eat. You see I still cling to the tradition of "seasonableness." Even were ours a family where the pocketbook required less careful consideration than it does, I am sure I should still refuse to put on my table strawberries in December (grown under glass and picked when half mature) or other fruits whose quality seems to have been determined solely by the exorbitant price they bring.

The wonderful improvement in shipping methods, storage, and handling, however, has made many fruits available and suitable for our tables that were formerly quite out of the question. One does not need to have lived to a "ripe old age" to remember when bananas were seldom seen in the smaller towns of the north, save for a short time in summer. Oranges were sometimes bought for the Christmas festivities but were never found on the table save as a luxury. Now, melons from the south of France, peaches from Belgium, as well as peaches, plums and other fruits from South Africa, are sent to the markets of our big cities in winter.

Studies by scientists show that fruits are not, as they are popularly believed to be, merely something to stimulate the appetite or please the palate. They have a very distinct food value, varying with the kind of fruit. Strawberries, blackberries, etc., have a larger proportion of water than have bananas, fresh figs, etc., while many of the dried fruits contain a high percentage of nutrients. Olives contain a large amount of fat, but this constituent is present in very small quantities in most fruits.

While speaking of bananas, I want to ask if all housekeepers know that the fruit as too often served is far from ripe. A little knowledge of the content of the fruit and of the changes that take place as it ripens will make the importance of its condition when eaten clear. Bananas contain a large amount of starch, when not fully ripe. When the fruit is mellow, this starch has changed to sugar. Clearly then, if you wish to serve cooked bananas, those less ripe will be suit-



CARTON
Endless Thresher

CARTON BELT

Heavier Duck—More Rows of Stitches.
Selvaged Edges—Always in Stock.

HUDSON MFG. COMPANY
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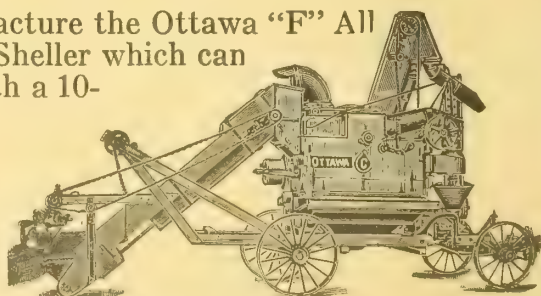
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The OTTAWA gets all the corn no matter
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We also manufacture the Ottawa "F" All Steel Cylinder Sheller which can be operated with a 10-horse gas engine.

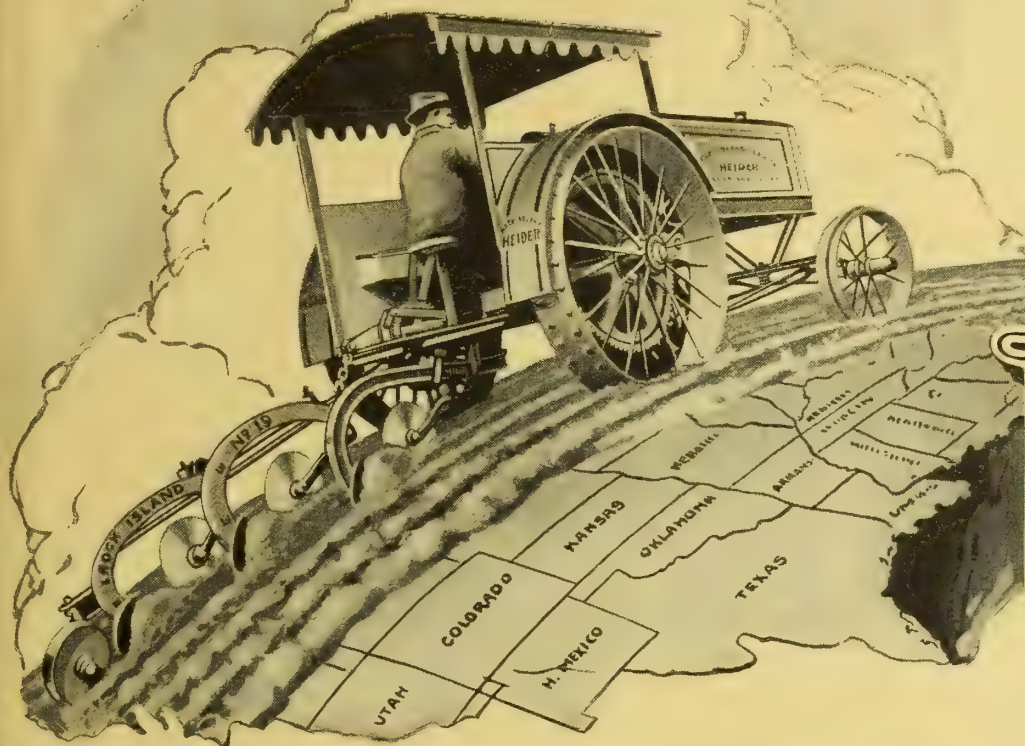
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Heider Tractors

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Two Sizes:
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Proved by 12 Years' Field Work

Thousands of Heiders in the last 12 years have solved the labor problem for their owners. The Heider has worked every kind of soil in America and a score of foreign lands. It not only saves man power in plowing, harrowing, disking, seeding and harvesting; it sets a higher tractor standard of smooth, dependable operation and fuel saving. The same is true of the Heider's belt work on silo filling, threshing and other power machinery.

No Clutch, Transmission Gears or Bevel Gears

The famous Heider Friction Transmission eliminates these gears. This means no expensive gear-stripping. All three units are in one—**doing away with 15% to 20% of parts.** The fewer parts through which the power has to travel, the more power delivered at drive wheels or belt pulley. There is no jerking or jumping, no vibration. It is a

steady power flow—like electric power. Heider gives **7 speeds forward and 7 reverse**, all with **one motor speed and one lever for traction or belt.**

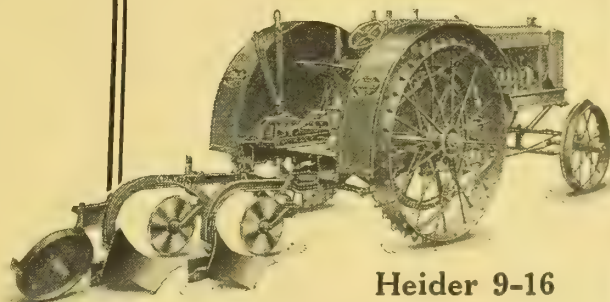
4-cylinder Waukesha motor, Dixie magneto, Kingston carburetor, Perfex radiator, Bennett air cleaner. Burns kerosene or gasoline.

Two sizes: 12-20 and 9-16. Send for catalog and "The Verdict Direct from Heider Owners." See what users say—**men who know.** They tell the amount of work you can expect—and how the Heider saves man power. Catalog also describes famous Rock Island CTX Tractor Plow and one-man Tractor Disk.

Rock Island No. 38
One-Man
Tractor Disk



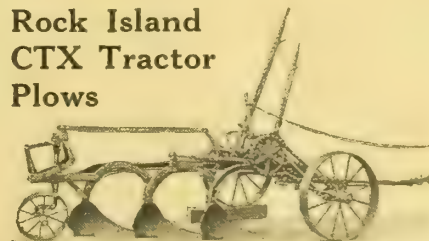
All levers operated from tractor platform—one man handles tractor and disk. High clearance—2 sizes, 8 and 10 feet.



Heider 9-16

Heider D 9-16 with Rock Island No. 9 Power Lift Plow attached. Foot lever control—automatic power lift. Ideal outfit for small or medium sized farm.

Rock Island
CTX Tractor
Plows



Successful everywhere—work behind any tractor. Front Furrow Wheel Lift. 2, 3 or 4 CTX Bottoms.

ROCK ISLAND

PLOW COMPANY 835 Second Ave. ROCK ISLAND, ILL.
Established 1855

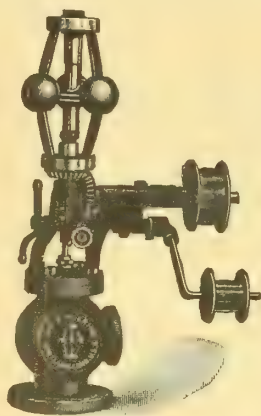
SEEDS

When you have Grass or Field Seed to offer, send us your samples.

Our unexcelled facilities for cleaning, grading and shipping, furnish sellers exceptional opportunities for marketing supplies.

Established in 1855

The Albert Dickinson Company
Minneapolis Chicago



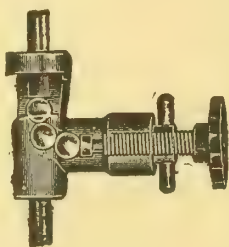
PICKERING "THE GOVERNOR WITHOUT JOINTS"

Equipped with

Ball Ranger Speed Changer

*Fitted to every
build of Engine*

The standard Governor for Threshermen, because giving wide range in Speed Adjustment, and close regulation.



The most durable Governor requiring least attention.

PICKERING Oil Pumps *Simple and Reliable*

Write us for particulars.

**The PICKERING
GOVERNOR CO.**
Portland, Conn. U. S. A.



able. But if bananas are to be eaten raw, see that they are mellow (a slight discoloration will do no harm). If, in addition to their being thoroughly ripe, you scrape the entire surface of the banana, after it is peeled, removing the outer layer of fiber, I venture you will seldom have any trouble with digesting them, unless your stomach is below normal. You would not think of placing uncooked starch in your stomach and when you know that unripe bananas, dried and ground, yield a flour or meal, rich in starch, you will understand that they are unsuitable for raw food.

Though the caution has been given before, in this department, I cannot refrain from urging again that all fruit, especially that eaten raw, should be thoroughly washed. On this point the Government report says:

"Fruit which has fallen to the ground may be readily soiled with earth, water, or other material that may contain typhoid or other bacteria. Indeed, cases of infection have been traced to fruits that have been contaminated in this way and eaten raw without being washed."

We have all either known or read of "fruit faddists" who claim that a diet of fruit and nuts is to be preferred to the usual mixed diet. Doctors and other students of the needs of the body, however, pretty generally agree that this is not true. In supplying the varying elements that the human machine requires, we probably stand a better chance of not making mistakes if we eat a variety of different foods. Among these, however, it seems to be thoroughly established that fruit is not only one of the most palatable but one of the essentials as well. If one finds that certain fruits cause trouble (as many people do in the case of strawberries, for example,) the sensible thing to do is to let that particular fruit alone. Though in passing let me say that a friend of mine claims that by dipping her strawberries very quickly into and out of hot water and then washing thoroughly in cold water, she finds no unpleasant results follow eating them, whereas berries not so treated cause her trouble. This may bear out the theory that much of the digestive ills following the eating of fruit would be eliminated if the fruit were first thoroughly cleansed.

Things You May Not Know

E. HARRELL

The vast variety of homely duties one is called upon to perform in the daily routine of housewifely affairs often results in one going about them week in and week out in the same old way without learning of ways outside of one's own experience, so for the benefit of just those women, there is set down here a short list of things you may not know:

Do you know—

That a teaspoonful of vinegar in the water in which green corn is cooked will keep it from turning yellow and cannot be detected when the corn is eaten?

That a tablespoonful of vinegar in the pan in which a pot roast is cooked improves the flavor of the gravy?

That washing a fowl or roast of beef with vinegar before it is put in the baking pan makes it tender and does not affect the taste of it?

That a tablespoonful of vinegar in the water in which cabbage or cauliflower is cooked removes the disagreeable odor caused by the boiling as well as preventing the usual influx of flies?

That vinegar kept in a bottle over the kitchen sink is excellent to rub into the hands after dishwashing, to whiten them and to keep them in a presentable condition?

That salt moistened with vinegar is a splendid polish for cleaning tarnished brass?

So much for the good old vinegar jug. You see there are many uses for its contents, so, busy housewives, do not longer consider it valuable only for pickling and for the cut glass cruet on the dining room table. Doubtless when your attention is once turned in that direction your own ingenuity will invent numberless other ways in which it may be used to advantage. Meanwhile if in the list above there are a few suggestions new to you, do not allow them to be longer enumerated among the things you do not know but make them your own by giving them a trial.

Hot Weather "Drinks" and "Eats"

PINEAPPLE BEVERAGE.

Pare one large pineapple and cut or chop rather fine. Add to it one cup of sugar, or more if you wish it sweeter; stir well, pour over it a quart of boiling water and let it stand until cool. A thick slice of lemon may be added if liked. Strain the liquid and chill before serving.

CURRANT SHRUB QUICKLY MADE.

Heat ripe red currants until the juice runs freely; strain, and to each quart of the liquid add half a pound of sugar; stir until the sugar is dissolved, then add a thinly sliced lemon and a grating of nutmeg. Pour upon the beaten whites of two eggs and serve in glasses half filled with cracked ice.

APPLE COBBLER.

Pare and slice tart, juicy apples to make a quart; put on the fire with one quart of cold water, one cup of sugar and a small piece of stick cinnamon. Simmer until all juice is extracted, then strain, add the juice of a lemon, and when cold serve in glasses with a little chipped ice. Pears, ripe peaches and quinces are nice used in this way, and one quince

cooked with the apples gives a pleasant flavor.

CHERRY COBBLER.

Stone one quart of cherries—one quart after they are stoned—and strew upon them one heaping cup of sugar; let stand fifteen minutes, then add one lemon and one orange cut in thin slices, and one pint and a half of ice water. Stir well and pour into glasses containing a small quantity of shaved ice. See that a few cherries and a slice of orange or lemon are in each glass.

CURRANTADE.

Mash together two pounds of ripe red currants and half a pound of raspberries; the red ones are the best for the purpose; add one pound of sugar and three quarts of cold water. Mix well and strain. Serve with or without ice, as preferred. If placed on ice this will keep three days.

STRAWBERRY AND GINGER FRAPPE.

Squeeze the juice of a lemon over two quarts of hulled berries; add a cup of sugar, stir well and let this stand about ten minutes; strain and add two or three pint bottles of the best ginger ale. Serve cold.

Other fruit may be used in place of strawberries.

Dark syrups are excellent in dark ice creams; honey is delicious in a frozen dessert, and maple mousse is a favored delicacy.

ICE CREAM.

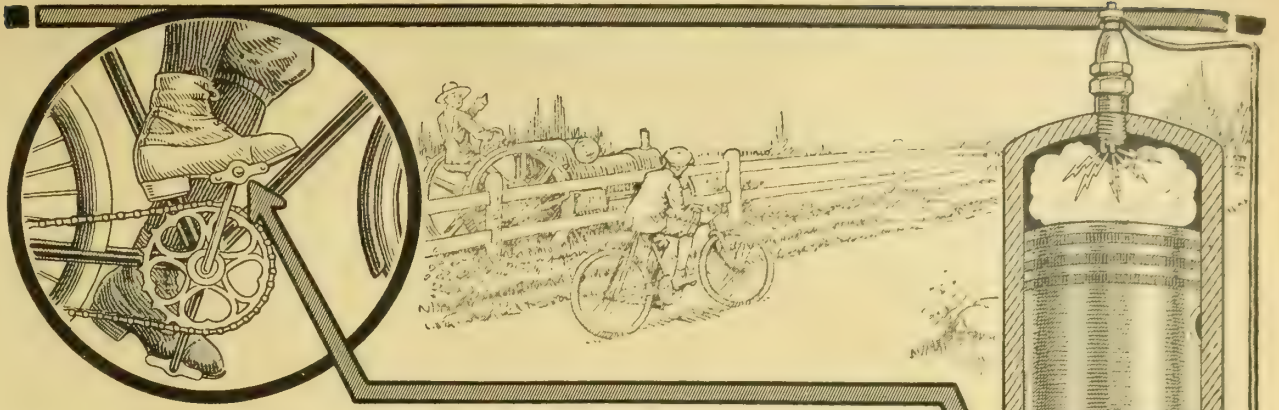
One quart thin cream, one tablespoon vanilla. Sweeten with three tablespoons sugar, one-half cup corn syrup, cane syrup, maple syrup or honey; or with one-third cup light syrup, one-third cup honey or maple syrup; or with two-thirds cup of honey or maple syrup. For variations, add two-thirds cup unsweetened peach pulp or other fruit, or one and one-half squares chocolate.

Vanilla may be reduced one-half when maple syrup is used.

CHERRYADE.

Take three medium lemons to each quart of water and one cup of sugar. A great deal depends upon the acidity of the lemons, and the amount of sweetening is a matter of taste. Cut thin slices from the center of each lemon and put aside; press the lemons and extract the juice and some of the flavoring from the skin. Put the juice, chopped rind and sugar into a bowl, pour on the desired amount of boiling water, and leave it to stand in a cool place. When it is cold, strain, half fill the glasses with cherry syrup, fill up with lemonade, and serve it with chipped ice. A few stoned and halved cherries can be put into each glass as a garnish.

Five gallons of gasoline will generate eight thousand cubic feet of gas, which, when ignited, expands to four thousand times this space.



Power At The Right Time

Did you ever ride a bicycle up a steep hill like this?

If you have, you know the absolute necessity of putting every ounce of power on that top pedal the instant it reaches center and starts downward.

The same is true of the piston of the tractor engine. The gas in that cylinder must be completely burned or exploded so that its full punch will come exactly at the instant when the piston starts on its power stroke.

If the gas takes even the thousandth part of a second too long in burning, the punch comes late and some of the power is lost. If it fires a thousandth part of a second early, it pushes backward on the crankshaft and works against the other cylinders.

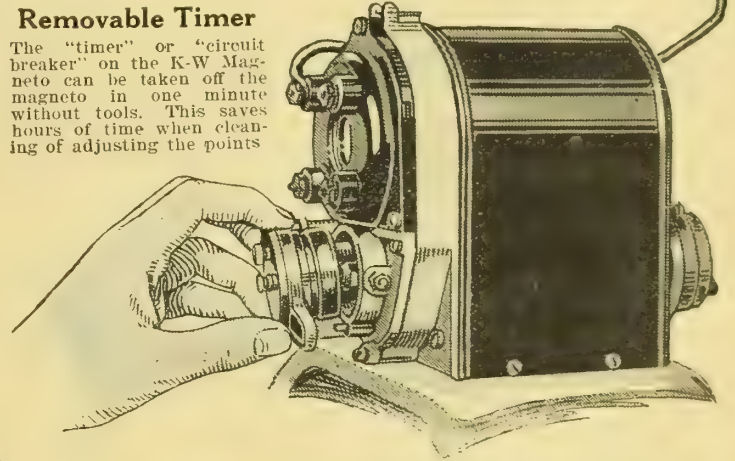
The generation of the power and the proper timing of it depend on the heat of the spark produced by the magneto.

The K-W Magneto on a tractor is assurance that you will get the full power out of every drop of fuel, and that you will get it at the time when it will do the most good.

The spark is intense and hot. It fires the entire mixture quickly and completely. It is the difference between a motor that "just runs" and a motor full of "pep".

Removable Timer

The "timer" or "circuit breaker" on the K-W Magneto can be taken off the magneto in one minute without tools. This saves hours of time when cleaning of adjusting the points



THE K-W IGNITION CO.
2837 Chester Ave. CLEVELAND, OHIO, U.S.A.



Fires Any Fuel—Gets Maximum Power Out of Every Drop.

INSYDE TYRES
—genuine inner armor for auto tires. Double mileage; prevent punctures and blowouts. Easily applied without tools. Distributors wanted. Details free.
American Accessories Company Dept. 1-2 Cincinnati, Ohio

The Old Reliable

Buller Automatic Coupler

The style illustrated here is especially constructed for engines with flat drawbar. It is made for three sizes of bars, 3/4x 2 1/2, 3/4x3 and 1x4 inches.

Drawbars of other sizes than these can be made to fit with a little help from your blacksmith.

This is but one of the many different styles—there's a Buller Automatic Coupler for every engine.

Illustrated catalog with full description and prices will be mailed on request.

Buller Coupler Co., Hillsboro, Kans.



CUSHMAN

Light Weight Farm Motors

Weigh only 40 to 60 pounds per horsepower, about one-third as much as ordinary farm engines, yet are more powerful, more durable, more economical.

We get increased power without increased weight because of an improved design, better material, higher grade mechanics, accurate balancing and improvements in carburetion, ignition and lubrication.

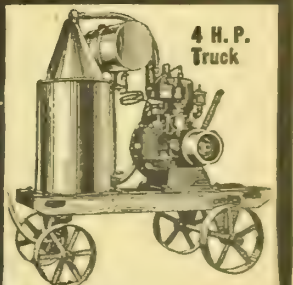
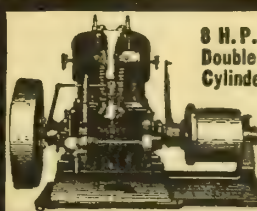
4 to 20 H.P.

Because of their light weight, and also because they can be run at various speeds, Cushman Motors are known as All-Purpose Engines. They not only do all stationary jobs, even more satisfactorily than ordinary engines, but they may be attached as power drive to such machines as harvesters, hay presses, corn binders and pickers, potato diggers, etc.

Cushman Motors are equipped with an accurate Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump, without extra charge.

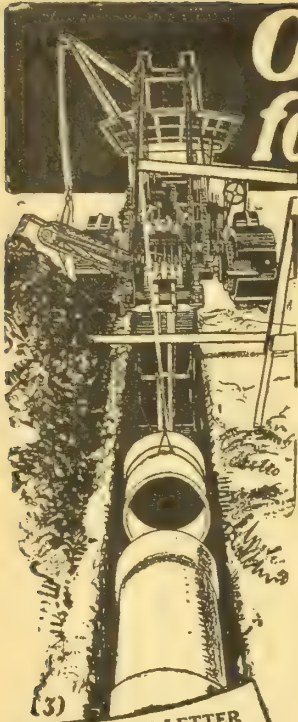
Write today for book on Light Weight Farm Engines. (310)

CUSHMAN MOTOR WORKS
875 North 21st Street Lincoln, Nebraska



More Power per Pound

Opfer Got \$160 for 48 Hours Work



In every locality there's plenty to do. You'll be busy 7 to 10 months in the year. The income is from \$15 to \$20 a day, the expense little. Mr. Opfer is only one of many of our friends who are making that much and more with a

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send for Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for this book, you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.

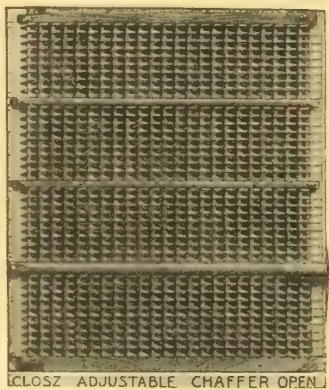
197 Crystal Avenue

Findlay, Ohio

READ THIS LETTER
I excavated a trench 16,000 feet long, average depth 25 inches. I received 1c per lineal foot, or \$160 for the job, and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him, tightened the governor to gain speed and in 2 1/2 hours had the 2,200 feet finished. Average of 800 feet per hour for the two and three-fourths hours at 1c per foot is \$3.00 per hour.
JOHN C. OPFER, Sandusky, O.

Mention The American Thresherman and Farm Power

The Chas. Closz Patent Adjustable Sieves and Adjustable Chaffers



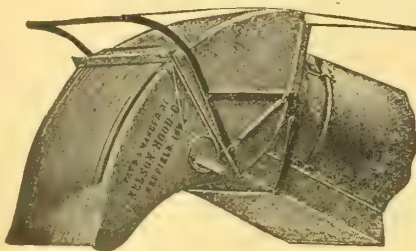
have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa

Mention The American Thresherman and Farm Power



The "OLD RELIABLE" NELSON HOOD for Pneumatic Stackers

First Stacker Hood placed on the market that cleaned the straw of dust and rust and deposited the straw on the stack like a slat carrier.

It has been on the market 5 years longer than any other make and will be there at the finish.

Other later makes of hoods have already dropped out, and the last of them are trying to exist by being furnished free with other goods. Their principles were not right, and the people have found it out.

We are making the "Old Reliable" Hood in the regular size, also in a special small size for the small size separators which have a small blower pipe.

You can get these hoods from your thresher company or order them direct from us. Please write today for catalog and prices.

Nelson Hood Company, Redfield, Iowa

Under-Draining

BY H. A. CRAFTS

UNDERDRAINING has for ages been one of the important functions of the agricultural art.

Today underdraining is just as important as ever, if not more so.

The occupation of public lands has reached such a point that the farm settler now finds but little virgin soil to take up as a homestead.

This one fact emphasizes the importance of underdrainage which in reality means simply the reclamation of waste land.

And when we come to consider the question a little more carefully, and to extend our analysis, we discover that underdraining may be made one of the most profitable of all farm undertakings.

For this reason underdraining implies the reclamation of flat, low lands; and these lands are without exception composed very largely of decomposed vegetable matter, of humus, to employ a more orthodox term. Now it goes without saying that this class of land when once underdrained becomes the most productive of all land.

As for instance, the delta lands of California; of the Mississippi; of the River Po and the Nile.

Yet there are parts of a large percentage of all farms, farms of both the humid and arid regions that are affected with an excess of moisture, and can only be made tillable by a thorough system of underdraining.

In New England a farm may have its swales, intervalles, meadows, and river bottoms. It is these places that must be underdrained to become profitably productive.

In arid Colorado there are river bottom lands, and lands that have been seeped and alkaliied through the run off of adjoining irrigated lands.

Underdraining is the only mode of bringing these lands to a tillable and productive condition.

In California we find the seeped and alkaliied lands also; but far and beyond these are the great marsh and delta lands of the Sacramento and San Joaquin valleys.

To be sure very large tracts of the delta lands are overflow lands, and can only be reclaimed in the initiative by being diked and pumped out.

Yet underdraining does not come amiss even upon this class of lands.

There were two principal modes of underdraining in the earlier days, and largely in many sections these same modes are still extant.

One kind of underdrain is what is called the "blind" drain. This is constructed by the digging of a deep, narrow trench, and filling the trench several inches deep with cobble stones or broken rock, and then filling

the trench to the top with the gravel and soil excavated in the digging of the trench.

The second method is to dig your trench the same as in the instance already given, and then lay in the bottom of the trench a line of open jointed drain tile.

Both methods are of rather an expensive character, but agricultural experience has generally proven that the game was worth the candle.

Now in California we have adapted a new mode of underdraining. And let it be known that this new mode is made possible only by the use of the farm tractor, as the method largely resolves itself into a question of motive power.

In addition to the farm tractor but a single implement is employed; and this implement is what is known as the "gopher" or "drainage" plow.

This machine is a very strong but quite a simple affair. It is composed principally of steel beams.

There is a bed of beams coming to a point at the front end. This bed is mounted upon two wheels and axle, situated a little in front of the central cross line.

To the front extremity of the bed is jointed a powerful arm that is bent at the elbow at an angle of about forty-five degrees.

The front section of this strong arm extends backward; the rear section extends downward.

To the lower end of this rear section is attached the plow point which "gophers" the hole, or drainage tunnel; and just back of the plow point, say six or eight inches, is the follower, which is in the shape of a steel cone, laid on its side pointing forward.

This follower enlarges the tunnel, or gopher hole, as it is dragged along behind the plow point; and at the same time it solidifies the walls of the tunnel, leaving a perfectly formed underdrain.

Outside of the parts enumerated are a couple of adjusting wheels, and that pretty nearly sums up the mechanism of the affair.

The gopher plow is calculated to cut to any depth up to four feet, and lay a drain anywhere from six to twelve inches in diameter.

Pulled by a powerful farm tractor, this instrument will lay a drain just so fast as the farm tractor furnishing the motive power may be speeded up.

By this method thousands of acres of land that have laid idle and useless for years are being underdrained and under modern farm tractor cultivation are being made the most productive of all lands.

In many respects orchard plowing is harder than ordinary field plowing.

Aultman-Taylor

New Century Threshers

**FOUR SIZES
All Standard**



From Grain Head to Grain Bag without a Loss

YOU'D fire a hired man that dribbles his time, his job—and your profits.

Why not look at this thresher proposition the same way? If you raise a 20 bushel per acre crop of grain—then feed that grain into a dribbly separator that shoots 1 bushel of every 100 out with the straw—sends the rest into the bag, chaffy, dirty, full of broken grains—you're not giving *yourself* a square deal.

You are not only entitled to 100% of the grain you grow—you can get it with an *Aultman-Taylor New Century Thresher*.

From grain head to grain bag without a loss—that's the way the New Century handles your threshing job.

Saves ALL the Grain

The Universal Rotary Straw Rack, an *exclusive New Century feature*, gives double the separation of the ordinary vibrating type of rack. It has a two-way movement—agitating the straw twice to each revolution of the crank shaft. Thus it moves the straw *continuously* rearward. In combination with the New Century Inclined Open Web, it *absolutely prevents clogging*, doubles the capacity and insures *perfect separation*.

The New Century not only does *better* threshing—but does it on less power. Hyatt Roller Bearings, used on the cylinder shaft in conjunction with the famous Rotary Straw Rack, make this the *easiest, smoothest running thresher on the market*. Tests show a saving of several horse power over ordinary babbitted bearings.

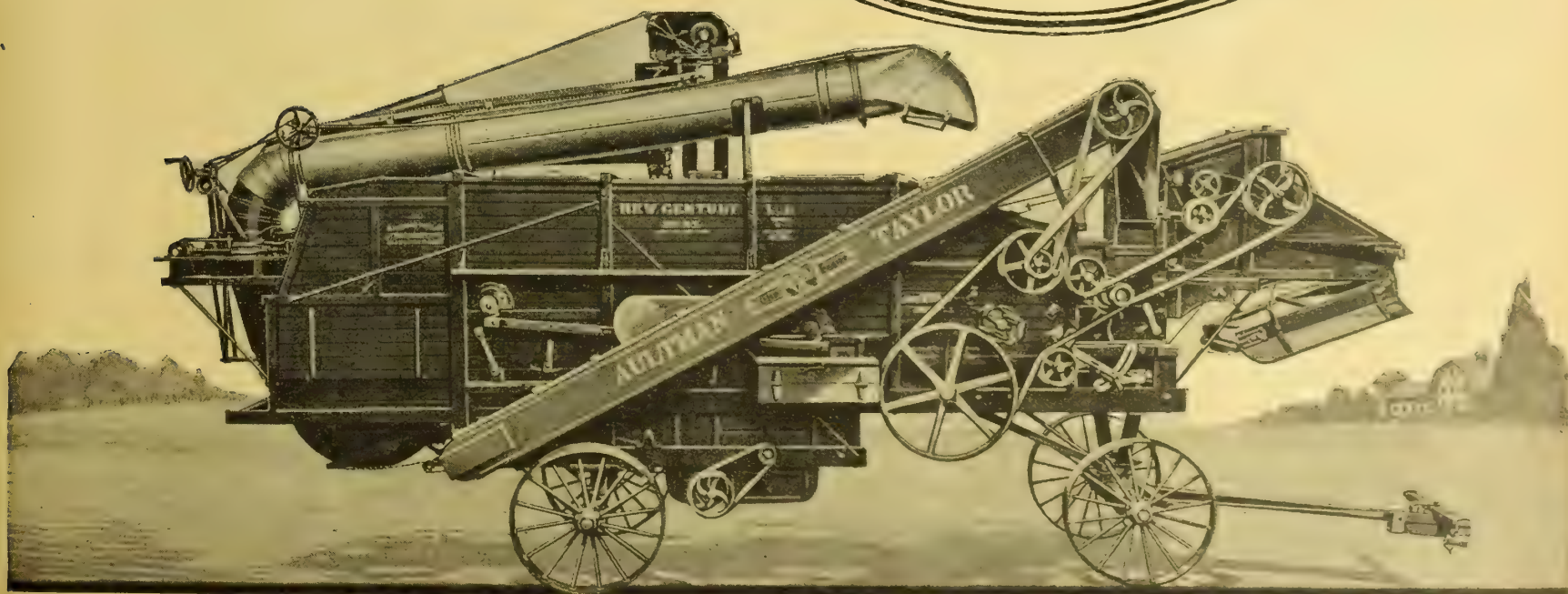
This makes it the ideal thresher to match your farm tractor.

Aultman-Taylor makes four sizes of threshers—all *absolutely standard in design and construction*. The two smaller threshers are the ideal sizes for your farm tractor.

Ask any New Century Owner. Or see your dealer or write us direct.

The Aultman & Taylor Machinery Co.
Mansfield, Ohio

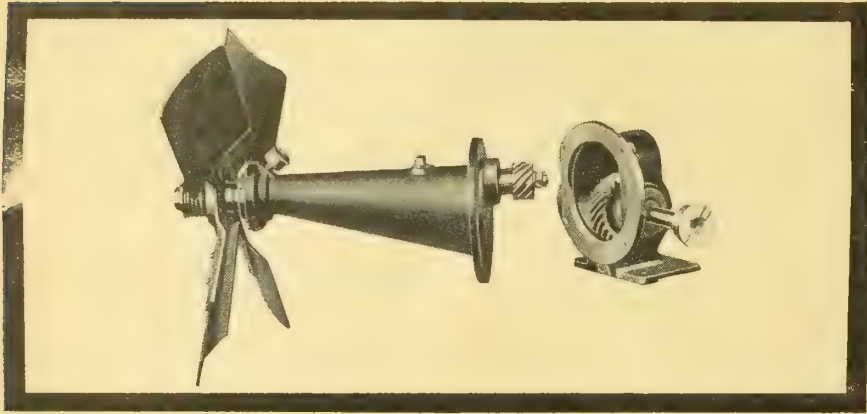
Canadian Branches: Portage La Prairie, Calgary, Regina



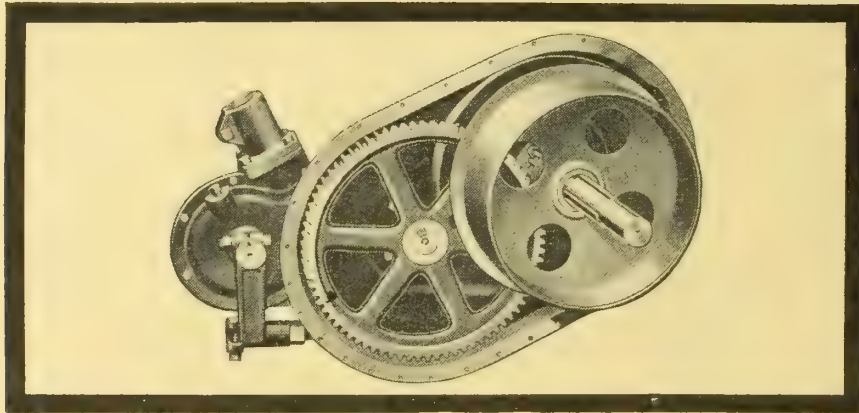
CASE

TRADE MARKS REG U S PAT OFF AND IN FOREIGN COUNTRIES.

KEROSENE TRACTORS



Gear driven fan—driving gears enclosed in dust-proof housing.

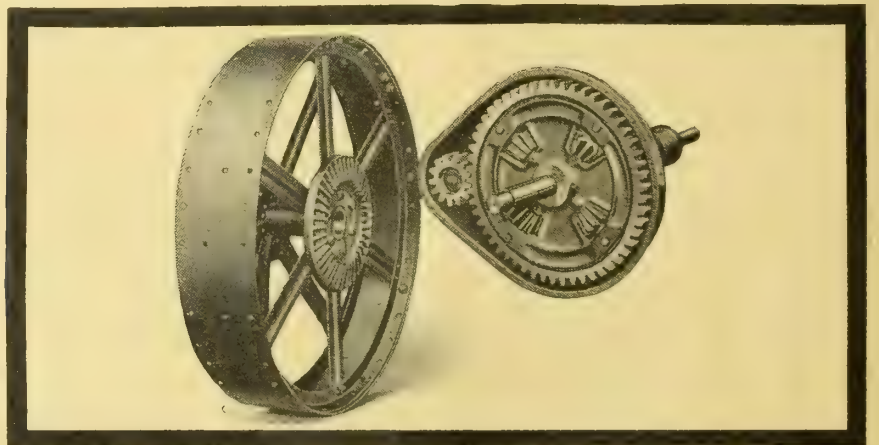


Cover removed from oil-tight housing showing first reduction gear; also enclosed steering gear running in oil.

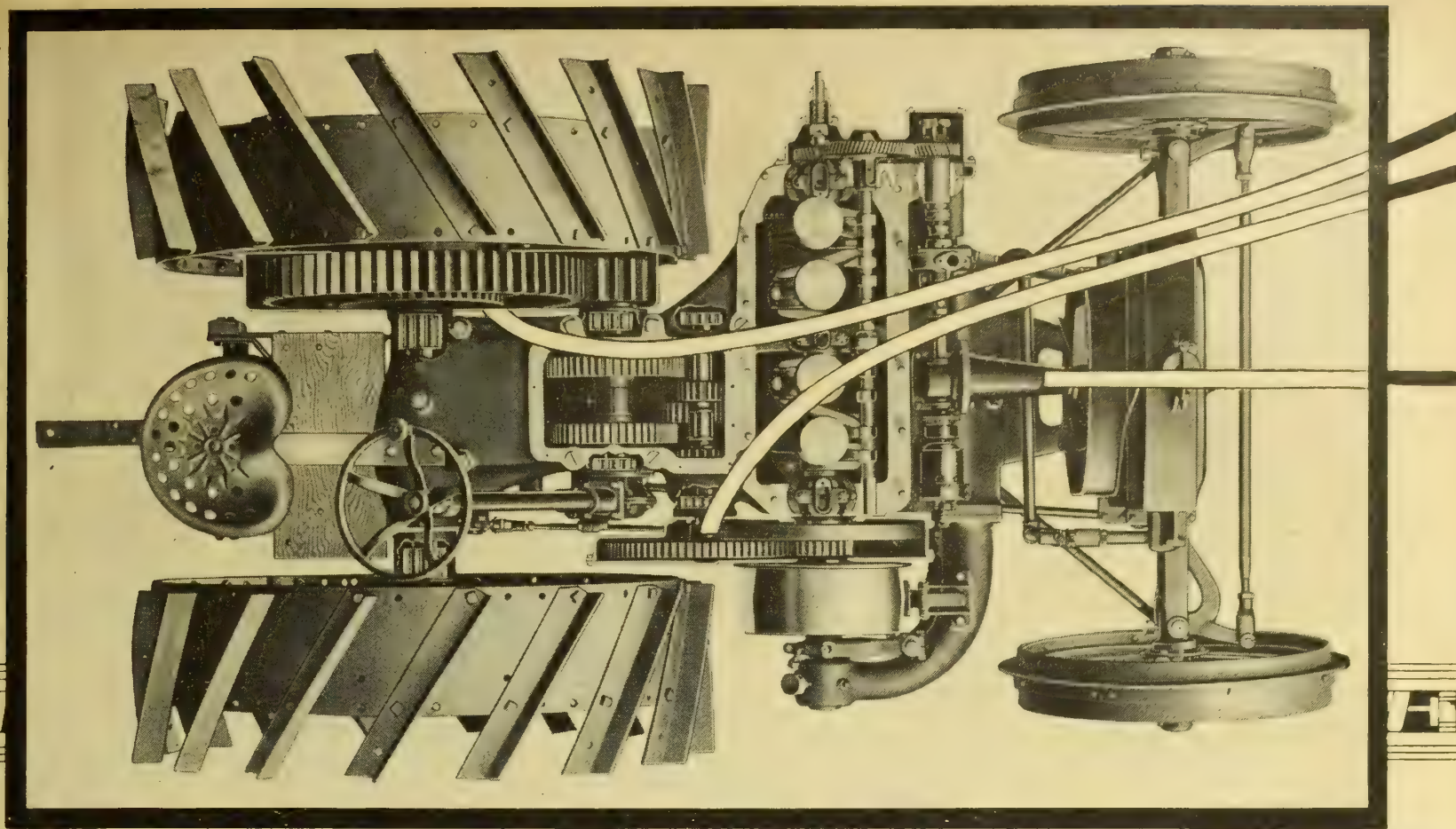


Look for the EAGLE Our Trade Mark

To avoid confusion, The J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.



Forged cut-steel master gear and bull pinion, with cover removed from dust-proof oil-tight housing.



The Protected Gears of Case Kerosene Tractors

IN the standardized design of the 10-18, 15-27 and 22-40 H. P. Case Kerosene Tractors, the gears are given absolute protection from the tractor's worst enemy—Dust.

Within the same carefully fitted housings that protect the cut steel gears from dust, there is retained a continuous supply of the tractor's best friend—Lubricant.

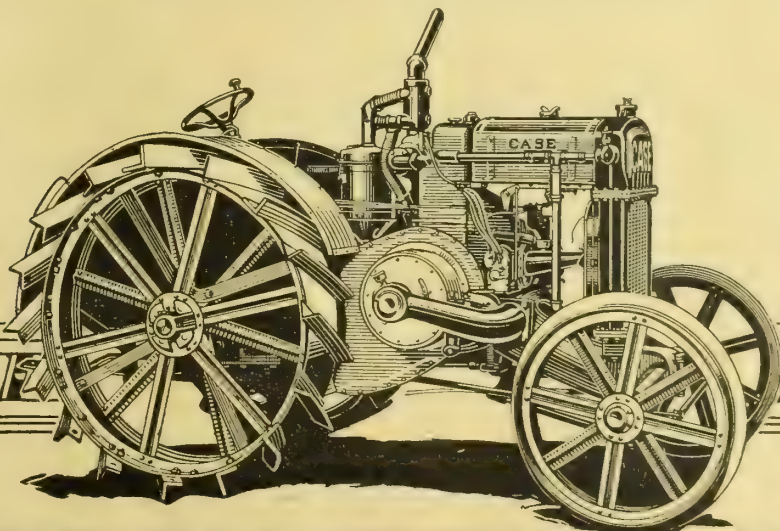
Here we have three of the important factors that contribute so largely to the long life of the Case Kerosene Tractor and to its satisfying capacity to stand up under the extreme requirements of field and road service.

First, spur gears throughout—recognized as the most efficient, longest lived type of transmission.

This better construction is made possible by mounting the motor crosswise on the frame. Second, these cut steel gears run in a constant bath of clean oil retained by substantial housings that positively keep out all dust and cutting particles of grit. Third, the friction reducing roller bearings shown in the sectional cut, together with the specially constructed rigid frames hold the gears in permanent alignment. The strains resulting from short turns and uneven field surfaces do not cause binding in Case tractor gears.

The same degree of skillful designing is characteristic of Case Kerosene Tractors throughout. Catalogs showing details of design and construction sent on request.

J. I. CASE THRESHING MACHINE CO., Inc., Dept. DJ-8, Racine, Wis., U. S. A.
Making Superior Farm Machinery Since 1842



"NORMA"

PRECISION BALL BEARINGS

(PATENTED)



There is but one true measure of value, viz., the capacity for service. It is a recognition of this fact by responsible manufacturers which has made "NORMA" Bearings the standard in the high-grade magnetos and lighting generators internationally identified with cars, trucks, tractors and power boats of the better class.

See that your Electrical Apparatus is "NORMA" Equipped.

THE NORMA COMPANY OF AMERICA

Anable Ave., Long Island City, New York
Ball, Roller, Thrust and Combination Bearings

You Don't Have To Pack So Often

when you use

"PALMETTO" Packing

as it is made to give long service under hard conditions.

Lubricant in each single strand keeps it soft and pliable.

**Greene, Tweed
and Co.**

Sole Manufacturers
109 Duane St. New York



Let us send you a working sample without charge. It will convince you of its long service quality.

The CHESAPEAKE

Stitched Canvas Thresher Belting

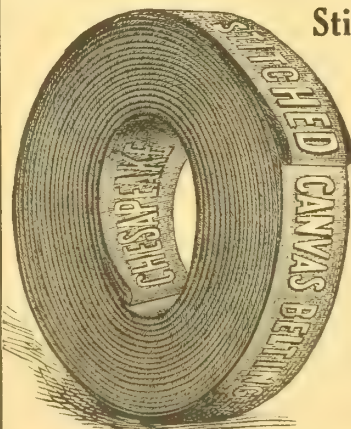
"Thirty years of service that has not been surpassed by any other canvas belt."

IT is made from the highest grades of raw material which are used after a most rigid inspection. The manufacturing equipment is of the most up to date type and there are thirty years of manufacturing experience behind the goods. All these points produce a belt that will give you the maximum service under all operating conditions. The price is reasonable, even low, for the quality offered. Full stocks are carried and prompt deliveries can be made.

You are offered Quality, Experience and Service at a minimum price. Samples and further particulars will be gladly sent without obligation.

The Chesapeake Belting Company
821 McKim St. Baltimore, Md.

Also Manufacturers of
STAR BRAND BAR BELT DRESSING



Solution Is More Production

BY C. A. BACON*

GREATER production is unquestionably the solution to the world's present problems. To bring about this production at less cost would be a most happy way to solve the difficulties.

It is a well known fact that a man with a full stomach is more amenable to reason than one who is half-starved. Any of our wives can testify to this. The real reason why we have radicals and anarchists is simply because living conditions are not what they ought to be. And the people who are most bitter in their denunciations of law and order are those who know the least about their benefits. Hence, the first thing to be done is to prepare food for the hungry mouths.

Farmers received extraordinary high prices for their produce during the period of the war and shortly before the war. Hence, contrary to the idea of a great many people, the war was not the cause of high prices. It merely accentuated them because it took millions of men from the productive side of life and put them into the destructive side, leaving the same amount of productive work to be done less these millions of men.

Food production is a patriotic duty that must be performed by all who are in the business of providing necessities of life. Naturally, the bulk of this work falls upon farmers. Regardless of their feelings in the matter, farmers have always come across one hundred per cent in every food crisis in the history of the United States and they will in the future.

The reduction in prices that farmers have been obliged to stand for certain of their farm products in the past few months, particularly meats, compared with the price of grains, does not warrant their continuing in the meat producing business from an immediate profit standpoint. Farmers undoubtedly have legitimate complaint in this respect and there is no use in trying to dodge the issue. On account of these things the big problem confronting farmers today is one of patriotism. Business conditions are such that the present time demands greater patriotism than was displayed during the recent war. Are farmers willing to produce with all the effort they possibly can to ward off a possible condition in the United States similar to that now being experienced in Russia? Being the producers of necessities and not having the proper organization for the marketing of their produce farmers are more or less at the mercy of the market. The nation requires a different kind of patriotism

in the face of this warfare than it does when battles are being fought and our sons are dying by the thousands. Resentment against injustice is harder to cure than an open wound.

Farmers must realize the importance of producing to the utmost to protect the sanctity of their homes and also those of the very people who are working this injustice. When once farmers understand this production will move along in the right channels. Labor, to receive the present high wages, must produce more to enable the employer to utilize it. The idea that the whole world can make money with less effort is wrong. Wealth is the result of accumulated labor and nothing else. People who think that the world owes them a living without striving for it are so closely approaching Bolshevism that it becomes a dangerous element in any society. The first thing is to root out that idea and it can only be done by a close application of the principle that man must reap by the sweat of his brow. A great deal of sound thinking on this subject must be indulged in by people in all walks of life. The farm labor problem is all important at the present time.

Farm boys must not rush pell-mell to the factory where they think they can earn a greater stipend than by working on the farm. Our boys who are inclined to seek a position in the city on account of the allurements of higher pay must reflect upon these facts. The average country boy going to the factory must begin as an apprentice. He cannot command the wages of a skilled artisan until he has become skilled. Time is required to bring this about.

The lad who rushes away from the farm under the impression that the five dollars or eight per day which he may earn will make him rich very quickly must ponder first what living in the city costs him and compare that with his living expenses on the farm, then compare the bank accounts at the end of the year with men in the city who are doing such work as he can do. He will find on such an examination that his bank account compares very, very favorably and in most cases is more than that of his city brothers.

It is not necessary to quote figures because a country lad can find out for himself by doing a little investigation of his own. The flash and glitter of city attractions last but a short time. When they are over, the country boy in the city is a most isolated lad. Every one must bear in mind this or fundamental fact: big salaries do not make people rich. It is the amount of money that is saved, not what

(*Manager of the Research and Agricultural Extension Department of the Oliver Chilled Plow Works.)

earned. It is a strange fact that the pasture across the fence looks greener and more palatable, and when the fence is crossed the greener pasture lies on the other side. This characteristic must be the animal instinct in human beings because every boy has seen it in every animal that grows on the farm.

Every boy is ambitious. If parents would see that any ambition has greater opportunity for development on the farm they could easily remove the thoughts of the allurements of city life from their boys. Unfortunately it has been the custom of people in the United States from its inception to regard farming as a lowly occupation, worthy of these who are not capable of doing anything else. Entering the counting house, becoming a member of the cloth, or studying some profession, are the records of the ambitions which the great majority of our colonial ancestors held out to their offspring. We have only to revert to Roman history to find out that the greatest men of the Roman Empire were farmers and it was an honor to belong to that class of people. There is no question but that the mental side of life controls the physical. For this reason it is necessary for parents to strive to make the country boy think that country life is the greatest place in the world for him to develop the best there is in him.

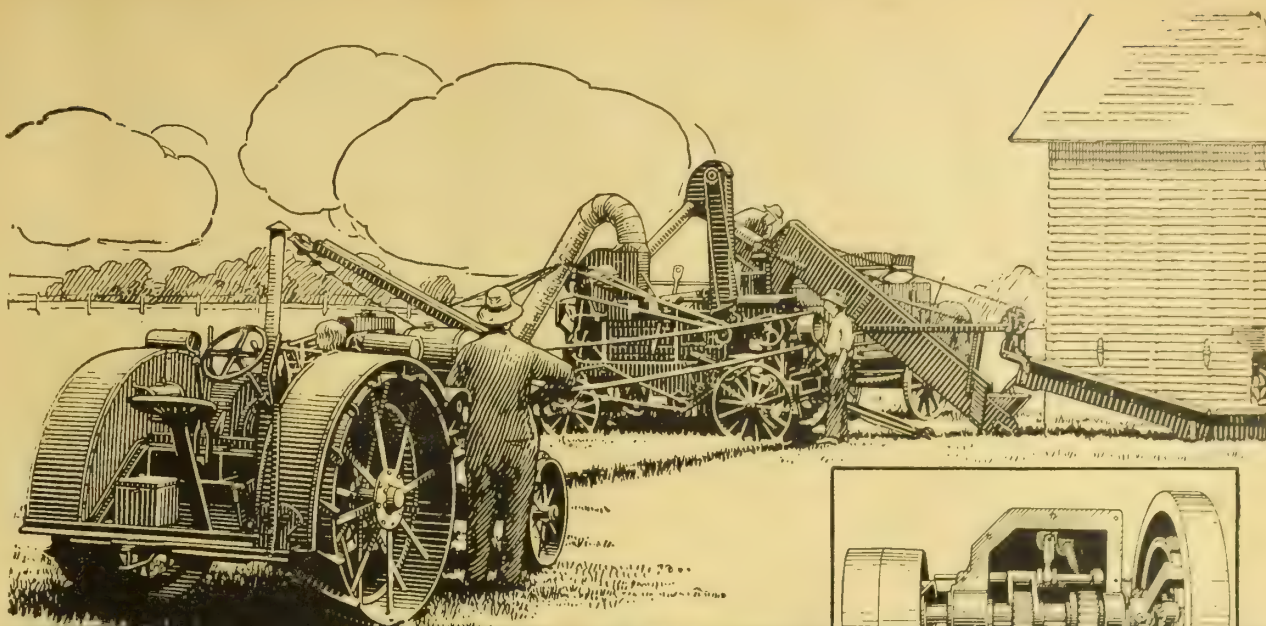
The science of farming is in its infancy. A lad who is scientifically inclined can find greater opportunity in the field of agriculture than in any other industry for the simple reason that it has been worked the least. The writer can enumerate dozens of things that are scarcely known and yet are vital to successful farming.

A young man inclined towards financeering, who thinks that a man receives fame in this world through becoming rich, has a wonderful opportunity on the farm. It is hard to make boys believe this but it is true. Farm financeering involves careful management and scientific knowledge just as much as any other industry.

Social life is the other incentive that pulls boys away from the farm. The rural social center movement is receiving great impetus and those boys and girls who take an interest in this work will find to their great surprise and edification that they can enjoy themselves in the country very much more than they can in the city. The mingling of neighbors in a social way is freer from the superficialities which are a part of practically all city social intercourse.

Before any of us think of leaving our farms let us first study what we are getting into, not superficially but deeply.

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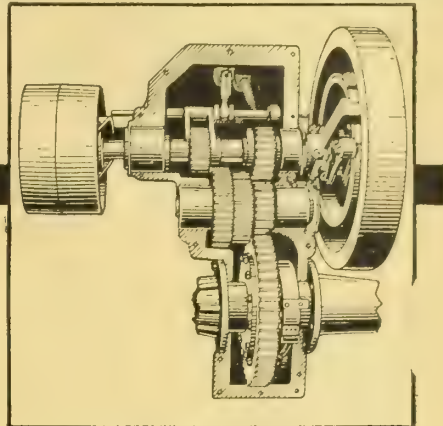
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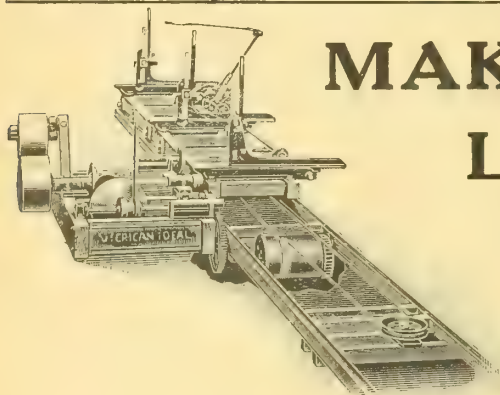
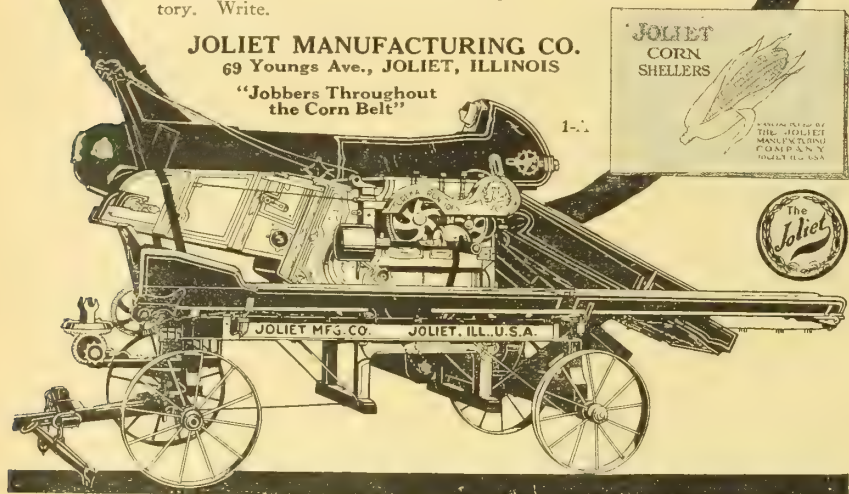
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What He Least Expected

By HOLWORTHY HALL

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"Jim—oh, don't—!"
"Yes or no!"
"Don't—don't—!"
"Yes or no! Answer me, or, by God, I'll answer for you!"
"N-no, Jim—"

There was a rustling in the grass, and the echo of a swinging blow, and a scream in crescendo.

And Hollister was through the hedge. The moon had chosen this juncture to slip modestly behind a veil of drifting clouds, but the bulk of the man Hartwell was sharply silhouetted against the silvered waters of the Great Sound. Before he could lift his hands, or brace himself, Hollister was upon him in a smashing rush which carried both men heavily to earth, rolling and tumbling down the declivitous pitch to the lower terrace and the decaying sea-wall. There they struggled passionately, and struggling, fought upward to their feet, and so locked tight together, buffeted and strained. In the first instant of conflict Hollister realized that he had met no weakling; that he had come to quarters with a man heavier and perhaps nervously stronger than himself; but he also realized in a lightning flash of intuition that Hartwell hadn't staying power. Hollister knew that in two minutes, or three minutes, or five minutes at most, he himself would be bruised and battered certainly, but still strong, still fighting; and so he battled doggedly, silently, reserving always that precious last ounce of strength which he should need, and use.

His gorge revolted at the physical contact, even as he clung to Hartwell, and clinched, and wrestled. Once the lawyer's right arm tore free, and his big fist found its mark, clean and true, and Hollister staggered and felt the turf undulating in the motion of great waves at sea, and felt sparks in his eyes; but the cool air revived him as he pounded his way doggedly into another clinch. And once, in turn, he drove his man to his knees, but Hartwell was up and in again, heedless of punishment, and giving blow for blow. And then the two were flung far apart by the might of their own strength, and Hollister, as he caught his balance, saw Hartwell's hand go into his pocket, and saw the gleam of di-fused light on polished metal. He laughed and rushed again. He knew his safety! The revolver wasn't even loaded!

But as he crashed into Hartwell, hammering at his face with his two fists, he was gifted by a curiously objective vision. It was as though the dual personality of this young Hollister had stepped aside, to watch the Hollister of reality commit this error. Desperately he lunged to seize Hartwell's arm, to imprison his hand, which grasped the weapon by the barrel; and as he lunged he felt himself parried and beaten off, and of a sudden he had the taste of sulphur in his mouth, and thunder in his brain, and the soft Bermuda sky above him was a sky of flame and fire; and the smooth turf dropped away into a pit of darkness, into which he fell headlong, smitten of energy and will, and, in falling, left all the world of flame and glare behind him. And his last sensation was one of disembodied glory that he was sinking into endless and unutterable peace.

CHAPTER XXV.

Now presently the soul of Philip Hollister, which had fled from a universe all flame-streaked, and monstrous in form and color, paused in its flight and hung in levitation; and presently it crept upward, step by step, and emerged into a universe all mottled with blacks and grays and dying embers; and the brain of Hollister throbbed dully; and the body of Hollister was lying inert upon the grass of a little terrace.

And he was still mentally apart from this; to himself he seemed a second personality, watching with curious interest that real Hollister, who had so egregiously blundered. From an immense distance he could hear voices calling to that real Hol-

lister, voices that were laden with anxiety. He wondered dimly why that real Hollister should lie there so callous, so indifferent. The real Hollister was hurt; that was evident. He was in grave pain. But the voices called to him so unceasingly, so tenderly, that it was highly reprehensible of that real Hollister to lie there and make no response.

And then of a sudden the twin personalities dissolved each into each, and the suffering was very real, and the voices were very real, but the terrace was swaying dizzily, and Hollister was sick and weak. There were arms about him, strong and gentle arms, and his head was being raised by infinitely easy stages, but with the accompaniment of darting, piercing shoots of pain, until it found rest upon a wonderfully comforting and soothing pillow.

And over him the voices began a fresh.

"Phil!—dear, dear Phil!—won't you open your eyes? Oh, Edith—!"

"He will—he will! In a minute now—"

Then a great coolness fell upon Hollister's forehead, and he tried to thank some one for it, and failed, because he could neither move nor speak.

"I'm not c-crying, Edith. I mean—"

"I know, honey! Moisten your handkerchief again!"

There were soft hands upon his temples; they hurt him fiendishly, but he knew that their mission was curative.

"Rub his wrists, Edith! With the palms of your hands!"

"I—I've been—I've been so wicked—"

"But that's over, now—isn't it? And he'll forgive you, too, I know." There was a tiny breath upon Hollister's cheek, and murmured words in his ear. "Oh, Philip—dear, dear Philip—won't you please come back to me?" And then, without volition of his own, his eyes opened slowly, and he perceived a tear-stained face incredibly close to his, and eager eyes peering into his. And as he looked, still with insouciance, the face grew burning red, and the arms which encompassed him trembled ever so little. He made a hasty effort to sit erect, and sank back, defeated by the synchronous convulsion in his brain. He was now assured that the arms of Ballin's cousin had supported him, and that her hands had ministered to him, and that her breast had been the pillow which had consoled him. He made another and a more determined effort to rise, no more successfully, but he found that without prohibitive martyrdom he could reach up and touch his head. To his mute astonishment, it wasn't a shattered pulp; but there was a mountainous region which, when his fingers encountered it, sent out a no-trespass warning.

"There! There, honey! Now—"

"Lie still—lie still!" the voice above him commanded gently.

By a prodigious expenditure of courage and muscle, Hollister sat up. His head was reeling, and unless some one had lent him active aid, he couldn't have remained even partly independent. The air of the sea invigorated him. He breathed experimentally. He breathed in great gulps. He turned his head.

The two girls were regarding him fearfully; and out of the wealth of his pride, he compelled a smile to hearten them.

"I—he must have—blackjacked me," said Hollister.

"Mr. Hollister—there's no hurry! Please don't sit up! Wait!"

"I'll wet the handkerchief again!"

"Lie down until your stronger."

"Please do what she tells you to, Mr. Hollister."

"I'm all right." Indeed, he was able to see them almost clearly.

"Don't try to stand up!"

"Mr. Hollister—you mustn't!"

"I'm all right," he insisted.

But he was no sooner on his feet than he began to sway perilously; and regardless of his self-esteem, he was glad to feel the renewed assistance of his two companions. Even then he wouldn't consent to remain

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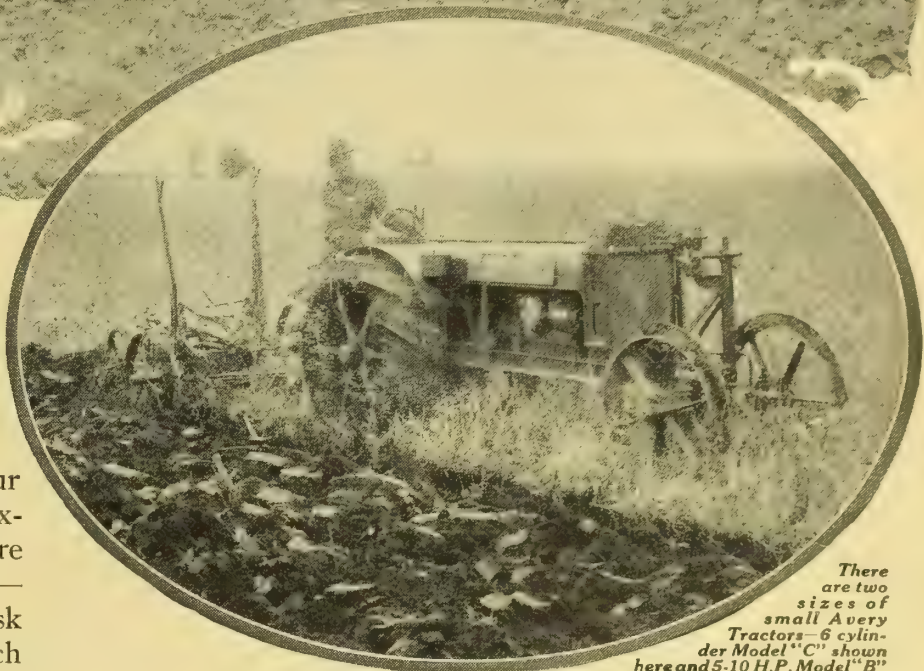
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stationary; and so, steadied by Miss Rexford and Ballin's cousin, he accomplished an advancing step and another, and gathered strength at every inhalation of the life-giving breeze. He had an arm over the shoulders of each of the girls; the necessity of it galled him as much as the verity embarrassed him.

"I can make it all right now," he said gruffly. He disengaged himself, and stumbled ahead to substantiate the claim. As his strength waned without due notice, he halted to recuperate it; when he faced about, filled with the delusion that his center of gravity had somehow shifted, he saw only Ballin's cousin on the lawn. Miss Rexford had disappeared. The incident was erased from his mind by a sudden flood of memory.

"What happened to him?" he asked. "Mr. Hartwell? He—he went away." Her voice was scorching. "Mr. Hollister—please don't try to walk any more! You're not strong enough yet. There's a terrible place on your head. Lean on me! There!" Her voice was ineffably tender.

Hollister chose the less humiliating of the alternatives—for the other one was to plump himself down upon the turf.

"He must have hit me with the butt of that gun."

Ballin's cousin shuddered.

"Yes, he did. Oh, I thought—you were so white, and so still—"

"The next time I see him," said Hollister, in a tone which was singularly emotionless, "one of us is likely to quit living. That's three items—" He tripped, and recovered himself. "How long was I—out?"

"Oh, ever so long. Edith and I—"

"Is she hurt? Is she?"

"No—no. You were in time."

"I wasn't sure—it seems a century since—I left you."

"Poor boy!" said Ballin's cousin softly. "You poor boy!"

"To have died—and come to life again—there?"

Ballin's cousin looked out across the Sound.

"I'm hating myself so, Mr. Hollister—"

"Why should you?"

"I've been so unjust to you—"

"Have you?"

"Haven't I?"

"But everything was so confused—I'm satisfied if you're sure now that I didn't—" He broke off and compressed his lips.

"That you didn't do what?"

"I've forgotten what I was going to say."

"You see—in addition to what we overheard—Edith talked to me—a little—when you were—unconscious—"

"Really?"

"Yes—and so you don't need to—defend yourself." She was now making a study of the turf. "She's so pretty—and she was so determined—"

"It was inexcusable," said Hollister. "On my part."

"No—because I excuse it."

"Well—in that case—"

Wheels rumbled on the highway, and stopped. Miss Rexford came noisily—very noisily—through the hedge and across the lawn.

"I got a carriage at Grasmere!" she called in a voice which was faintly hoarse. "All ready!"

Hollister squeezed the arm of Ballin's cousin.

"Thank you," he said. "Thank you."

Miss Rexford deliberately whirled, and went back through the hedge. Hollister observed that she was feeling tentatively of her throat. He had a keen premonition that after all he shouldn't be content merely to liquidate his account with Hartwell. "You must—we've a carriage, Mr. Hollister."

He delayed her by the simple expedient of stopping short.

"It was right here," he said, "that you and I started to be friends—and it was here that Miss Rexford and I—mixed things up—and—"

"And it's here," she said, subdued, "that you've showed me how brave and strong you really are—"

"And right where we are," he went on, hardly above his breath, "I began to—love you—and have loved you ever since—"

To his amazement she interrupted him. And the manner of her interruption was a source of vastly greater amazement. She put up her hand and placed a sweet restraint upon his mouth.

"Not now! Not until you've—"

But Hollister, whose innate stubbornness was magnified a thousandfold by the aching across his temples, had conceived an intention, and he didn't have the preventive energy to quibble about it. He

bent toward Ballin's cousin and swept her into his arms, and kissed her quickly and thoroughly and devouringly; kissed her while she clung to him in limp and despairing weakness; kissed her until there were untold depths in her eyes, and she was unresisting.

"Now," said Hollister shakily, as he freed her, "where's that carriage?"

CHAPTER XXVI.

Waking from a troubled sleep with the uncomfortable fancy that his eyehalls were being prodded by Hartwell's thumb, Hollister was solaced by the discovery that the phenomenon was due to the sunlight shining in his face. He yawned and stretched himself cheerfully, emitted a very heartfelt and entirely pardonable groan as he inadvertently bumped his skull against the headboard of the bed, and finally composed himself to enjoy his new sensation of relief and freedom from mystery. It was as clear as crystal now—but two details—and Ballin had sworn to reveal those to him this morning, since last night Hollister hadn't reached the hotel fit condition to receive explanations. Furthermore, no one had bothered much about him after he had once been interned in his room with a bandage on his head and spirits of ammonia inside of him. The general public had interested itself chiefly in Mr. Hartwell, who, in an extraordinarily disheveled condition, had come hurried at half past nine; and in fifteen minutes had gone out again, carrying a black leather hand-bag. From that point, the career of Mr. Hartwell was shrouded in doubt. He hadn't since returned to the hotel. He hadn't sought refuge at any other. There was no steamer he could have taken north or south; there was no route by which he could have escaped from the island. He had simply vanished.

Hollister sighed luxuriously, and brightened at a smart rapping on his door. In response to his hearty invitation, his friend Ballin came in and greeted him blithely and sat down at the foot of the bed.

"Hello, Phil! Feeling better? How's the belfry getting along?"

"Fine, thanks. Not bad at all. Four any trace of Hartwell yet?"

"Not a smell so far—but unless he made a clean get-away last night, he never will. Well, what can I do for you?"

"Nothing but hurry along some breakfast."

"Ordered it yet?"

"No. Ask the office to send up a waiter will you?"

Ballin complied, and resumed his seat. "Now, then, old boy—ready for business?"

"Shoot!"

Ballin lighted a cigarette and fondled his uppermost knee.

"Phil, I've got a horrible confession to make to you. I hope you won't want to slaughter me when you've heard it—but here she goes. About five months ago my uncle was careless enough to do something absolutely innocent but absolutely criminal. It gave Jim Hartwell a perfect strangle-hold on the poor man. He could send my uncle up to that gray pile on the Hudson in ten days after he got the machinery going. There wasn't any way out of it. But there wasn't any reason to expect that Jim would take any action, because it hadn't the slightest thing to do with his interests. At that stage, it was simply some information he had about another man's negligence. Now, my uncle told me and I told Pete—Pete's always been pretty close to me. That was just before Pete went abroad. Some time before Pete got back—and about the time that Frances came on the New York from the West where she'd been living—Pete wrote in a letter to me that Frances ought to have a companion if she planned to spend the winter in New York. You see, Pete knew her just as well as I do—well, anyway, I thought it was a good scheme, and everybody did—and when I mentioned it to Jim—he's always kept an eye on Frances ever since her husband died; he was a trustee, you know—he was decidedly for it. So we advertised, and by and by we got Edith Rexford. As it turns out, Edith Rexford's a sort of society detective, just as you thought—only we didn't know it then, of course—but she had a wonderful appearance and some wonderful references—they ought to have been; she wrote 'em herself—and she was so far ahead of anybody else who applied that Frances engaged her. Jim had engaged her for private reasons first, and sent her over to Frances to get the companion's job. Hello! Here's your waiter. What are you having?"

Hollister cogitated.

"Oh, half a grapefruit and some oatmeal."

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Ralph Conrad, age 14, Lucas, Iowa, runs this tractor at all jobs without his father's help*



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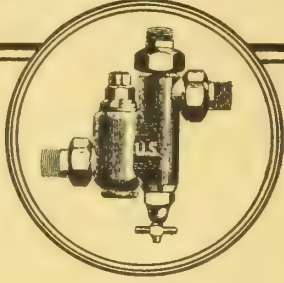
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and a young steak—with French fried potatoes—and—and waffles and a pot of coffee."

"You are ill, aren't you?" Ballin went to the door and gave the order. "Where was I? Oh, yes. Well—we didn't know, of course, that Jim had her working for him. She was to keep him posted on anything we might do that would tend to break his hold on Mr. Cloud—just a general all-around spotter, she was. All right. Jim came to me one day and said he wanted to marry Frances. Naturally I began to tell him what I thought of him—and he said he wouldn't expect me to give him any help, but if I showed any opposition, he'd railroad my uncle. And he could do it, too—do it easily! My uncle was absolutely without a leg to stand on. But this was the first time I'd dreamed that Jim would use that information as a club. It was a question of sacrificing either Frances or my uncle. It put me in a bad hole—you can imagine it."

"I sure can!" said Hollister feelingly.

"Well, I didn't know *what* to do! Because I knew that Frances is just enough of a wonder to have married Jim, if she had to, to save my uncle. And she'd already had one unhappy experience—and two punk husbands in succession are two too many. It was about then that you asked me to dinner up at the Club."

"I remember it perfectly," said Hollister.

Ballin threw away his cigarette.

"Phil, we were pretty good friends in Cambridge—I knew you all the way through. I knew you were a darned fine scout. I knew that any girl who got you would be lucky—"

Hollister leaped nearly to the ceiling.

"Ned! You didn't deliberately—"

"This is *my* monologue, old boy! At dinner that night while I was thinking about you, and what you'd told me about your future, the idea came to me—Now, you see, if I put any obstacles in Jim's road, he could absolutely send my uncle to a term in Sing Sing. I had to sacrifice either my uncle or Frances unless she just *happened* to marry somebody else. There wasn't any great rush, you understand; and Frances always liked your type, and I knew she'd like *you*—and I knew I couldn't hope to get a finer man than you are—and I thought if you two were thrown together a lot—"

"Holy smoke!" His lips formed the voiceless words. His eyes were saucer-like.

"And she was over at the Aspinwall, and you were flat broke. So I turned you down flat that night, Phil, and went home and doped out a plan—to invent a job that would sound like some sort of war service, or diplomacy, or commercial reporting, and call for traveling—and advertise so so that you'd fill the bill exactly—and I got Josh Brown to handle the details for me—and you know your side of *that*."

"Zowie!" gasped Hollister, pop-eyed.

"And we were going to think up so many assignments for you that you'd never suspect, but the trouble was that we couldn't be consistent and efficient at the same time. Well, then Pete came—and went into the thing with me, and before we'd made up any plausible sort of schedule for you, you met us at the Aspinwall. Instantly, Jim was suspicious. By now, I'd begun to see through Edith Rexford, and she knew I was getting dubious, and she'd told Jim. At first he was afraid of you because he thought you were *my* sleuth-hound to get the goods on *him* and to counteract Edith—and secondly because for several days I'd praised you so extravagantly to Frances that Jim tumbled to the fact that I was more than commonly interested in having you two get along together. And he was paying Edith to see that Frances didn't get many attentions from other men—because as soon as she was married, or even engaged, he'd lose his grip on my uncle."

"Holy mackerel!" said Hollister. "Give me something to smoke!"

"So, as it appears, Jim saw you later that night and pumped you, and made up his mind that he was right in his suspicions. So he tried to buy you off—"

"But if he *had* bought me off, you could have got somebody else—"

"There's more to it than that, Phil! Jim was out to show me that he could control the situation from any angle. He was out to show me that he could outbid anybody I hired. And although you didn't fall, you convinced him that you were dangerously close to headquarters, so he tried to show me that he could *frame* anybody I hired. He dug up a bit of your past and it happened to dovetail nicely. You'd been stone broke, and suddenly and unexpectedly you were in luxury. So Jim

got hold of a waiter at the Aspinwall, and gave him his old wallet and some money to buy some unredeemed pledges from a pawnshop on Forty-Second Street. The waiter had a pal who was a chambermaid. She was to sneak into your room as soon as you went down to breakfast and order a bromo-seltzer over the telephone. She got away with it. So when this waiter, who'd slipped a dollar to the bar checker to make sure he'd get the up-stairs work, was sent up with the bromo-seltzer, he could simply knock on the door, be let in by the maid and anybody who happened to be in the hall wouldn't see anything out of the ordinary. It would look like routine room service. The waiter planted the stuff in your trunk and went down again—after he'd tumbled your belongings around—under instructions—so you'd complain, and so that the house officers would find the plant, or else you'd find it in their presence. He'd assumed that you'd file your complaint before you looked very thoroughly yourself. He'd already kicked about losing his wallet. The waiter was to tip off Edith that he'd made the plant; and after that, she was to report a loss. She wouldn't report it, you see, until it was certain that the plant was made, and that you'd be caught. Then she reported what Jim had told her to lose—a diamond ring. That was a bad slip on Jim's part, because it takes a pretty clever pick-pocket to steal a ring off somebody's hand—and that left 'em only the theory that you'd been burgling rooms. Of course, Jim's wallet was the big evidence."

"Yes—it was," said Hollister reminiscently.

"That bar-pin must have fooled you—as a matter of fact, Frances gave it to Edith—"

"I know that."

"And the crooked chambermaid stole it—*actually* stole it from Edith's room—and lost it in yours!"

"Good lord! What makes you believe *that*?"

"Because they pinched her the next day for forgetting to put somebody's cuff-links back where she found 'em, and she admitted it—she didn't admit she'd been in cohorts with the waiter—but I'll guarantee she will when I want her to. She did admit stealing that pin from Edith, and swore she lost it, she didn't know where. Pete and I got *that* out of her when we saw her in her cell a few hours before we got aboard the boat to come down here."

"All right—you got out of that scrape—and it was lucky for all of us that Pete had his brains with him when he came over to the manager's office that night. Otherwise you'd have been cleared fast enough, but the whole scheme would have come out, and we'd have been bunkered. Then you were ordered down here—and I guess you know why. That letter of Edith's to Jim you've seen. Jim was seasick—and he never knew he dropped a whole bundle of letters on deck. Pete and I got 'em. Edith was getting surer and surer that you were dangerous as a rival or as a spy or both; that's why she cabled Jim to hurry down. She'd tried a couple of times to get you to confide in her; and even though you didn't, she was apprehensive. Pete and I were coming anyway—it was mere chance that brought us and Jim on the same boat. And in the meantime—you understand we've been thrashing these things out nearly all night, so I'm giving you the story consecutively—Edith had succeeded in bamboozling you, and relieved you of the copy of her letter out of your coat pocket. She's got mighty sensitive fingers. That was careless of you, Phil!"

"I know it," said Hollister, flushing.

"Jim got down here, and Edith told him that Frances was crazy about you. I'd managed to convince him that you were just a friend of mine with a genuine job, and that's why he apologized at first—because he thought he *might* have made a mistake, and that you might start some sort of action against him. So he went to my uncle and put the screws on him, because you two were pretty chummy. Jim thought you might yield to sentiment. That's why Mr. Cloud asked you to quit Bermuda—Jim had threatened to tear things wide open if he didn't. It was that same day that Frances started to ask me questions. Previously, we'd kept her from knowing about my uncle's foolishness; it wouldn't have done her any good—and because things were really getting almost too hot, I said so much that afterward she went straight to you. Of course that gave you two absolutely contradictory stories—one right after the other. And then Derrick came down."

"There's the waiter, Ned. Let him in will you?"

Ballin obligingly took the tray and placed it on a chair by the bedside.

"Want me to spread things around for you?"

"No, thanks—I want to hear the rest of it."

"Right-o! Well, Diederick had been Jim's law partner for a good many years, and first and last they must have put through some pretty raw deals together. Diederick knew enough and guessed enough about this one to get a pretty fair leverage; and Diederick was ill and tired, and he didn't have much money, so the day before Jim left New York, Diederick started in to see if he couldn't blackmail him. Jim ducked, and Diederick needed some ready cash, so he chased Jim down here to prod him at close range. He'd heard Jim speak of you and of Edith, and he got the names twisted. He thought you were Jim's watch-dog. So there's where your row started. And this is how Diederick got hurt—he came up to the veranda just as you went in after lunch. Jim saw him, and went out fast to flag him. They had some conversation, and Jim dared Diederick to do anything radical. And Diederick went straight to the office, where they told him Frances was in her room, and he went up intending to tell her the whole story. Jim caught him—and got out of it temporarily because you'd been careless enough to wallop Diederick earlier, and say you'd do worse the next time. And—I don't suppose I need to say that Edith took the opportunity to push you in a little deeper by telling Frances about your evening at Fairyland."

"But, Ned! Why did you and Pete make such a fuss that first day you were here about my telling Mrs.—telling Frances what I'd found out about Miss Rexford?"

Ballin shrugged his shoulders.
"I thought you grasped that, Phil. We were doing our best to stop Jim before he could make too much progress. And if the facts had ever got to Frances, she certainly would have done anything in the world to save my uncle's skin, even in promising to marry the beast—I mean Jim—and if we'd hampered Jim too much he'd have had my uncle's scalp in ten seconds. We'd have defended him to the end but it would have cost us a pile, and in the long run we couldn't have saved him. So there you are! And we had to make you think he was attacking you under a misapprehension, because we didn't know whether you were getting along well with Frances or not. We couldn't afford to take a chance on you just at that stage. We couldn't let you suspect too much—or you might have quit right there. And besides, you did disturb me because you talked so queerly about your job. We thought you might have spoken about it carelessly—and if Frances had known that, the jig was up for all of us—because she'd have ordered you off, and then we wouldn't have had you to play against Jim. And we couldn't have stepped in to clear you without telling the complete story—and then she'd probably have gone right to Jim and agreed to whatever he asked."

"But—aren't you going to give me the real reason, Ned? What's the basis of it?"

Ballin drew a long breath.
"When Frances' husband died, he left an estate of some four hundred and sixty thousand dollars, net. The income was to go to Frances for five years, and after that, if she hadn't married again, she was to get the principal. If she had married, she was to get a hundred thousand on her wedding-day, and the remainder was to go to my uncle."

"Now to Mr. Cloud Jim looked like a pretty solid citizen—he's big and imposing and a coking good blow-hard. And Jim likes to be with men he can dominate. So they went around a lot together—they came down here once—and eventually Jim had my uncle sewed up tight. My uncle thought he was a financial wizard—always making clever deals in Wall Street—all that sort of bunk. And the more Jim lied the more my uncle got infected with the get-rich-quick idea."

(To be continued.)

Mrs. Johnson—How does yo' feel dis mawnin', Joe?"

Mr. Johnson—"I feel bad—mighty bad! I wish dat Providence would have mussy on me an' take me."

Mrs. Johnson—"How can you expect it to ef you won't take de doc-tor's medicine?"—The Doctor.



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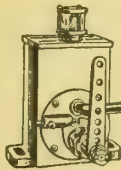
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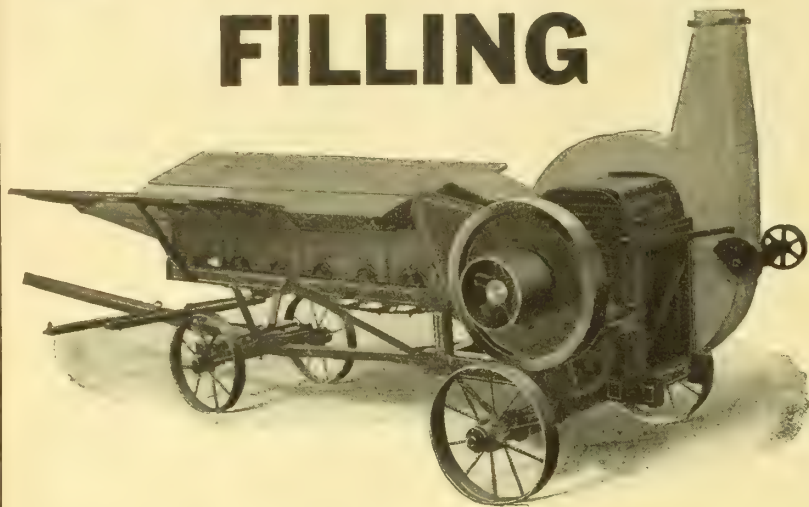
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Parson Dickson's Sermon

DE tenth vuhse ob de 'lebenth chaptah of de gospel of St. Luke reads as follows: "Foh eberyone dat axeth receibeth; an' he dat seeketh findeth; an' to him dat knocketh it shall be opened."

De Lawd jest seemed to preach whole suhmions in de fewest possible wuhds, an' He used de simplest wuhds to convey His meanin' ob all de prophets who done came befoh Him, an' what am best ob all am de fact dat all who will can undahstand de meanin' ob his wuhds.

Sometimes we questions de meanin' ob some ob de sayins' ob Jesus while on earth, but nowhah in all His teachin's did He try to use any big wuhds or long sentences dat seemed confusin' to de human mind. From de beginnin' ob His min'stry until dey cruc'fied Him, de Lawd could be undahstood by all who huhd Him. It was only when de chief priests an' de Pharisees tried to get Him tangled up in de law an' whah dey could contradict Him dat He ansahed dem by axin' dem oder questions.

If yo' will read cahfully de fohh gospels ob Matthew, Mahk, Luke an' John, yo' will find eberything tole in de same plain mannah in which Jesus Himself talked to de people. Matthew was de most explict ob de fohh in his test'mony but nowhah did any ob dem dodge or try to avoid de true facts jest as dey took place, no mattah who was hit by de statement. Matthew must hab had de bery greatest ob respect foh Petah, but when it done came to tellin' how Simon denied his Marster an' cuhsed an' swoh dat he didn't know Him, Matthew told de straight, simple stohry jest as de Marster had taught Him to do. It pays to be honest, an' to use de simplest kind ob language in givin' test'mony an' all de gospel writahs am credited wid doin' so, eben by dem dat deny de divinity ob Christ or dah belief in de Scriptuahs.

In de wuhld ob business yo' will find dat de man who seeketh always findeth an' de one dat axeth generally receibed all an' moah dan he am 'spectin', an' he dat knocketh at de doah in earnestness an' in truf always finds it openin' unto him. In de business wuhld de man who goes about complainin' ob hahd times an' nothin' to do am de man who don't try to get along as de Lawd has done tole him to do. He am lookin' foh de cawn to be shelled an' foh de taters to be dug an' de cabbage patch hoed an' eberythin' else made ready foh him. Yo' kaint dig taters when yo' don't plant de seed, an' de cabbage done has to be transplanted from de hot bed an' watahed an' kept growin' if yo' 'speets any kraut in de fall.

In dese troublesome times when eberybody seems tryin' to do things different an' whah confusion an' discohd prebails, it behooves us, mah chillern, to teach an' preach an' practice contentment 'stead ob trouble an' discohd. What de wuhld needs at dis time am preachahs who will help bring de people back to God in every way—ministahs ob de gospel to preach an' practice de Fathahhood ob God an' de brothahhood ob man. It takes a long time to get ober such a wuhld wide calamity as de great wah has caused, an' yo' kaint teach boys how to fight an' kill an' slay dah fellowman an' hab dem put dis into practice upon de battlefields, as we done had to do to sabe de wuhld, an' den look foh dem to begin bein' Christian soljahs as soon as dey shed dah unifohms an' put on citizen clothes. Dat ain't de way ob human life.

De teachin's necessary to crush a nation an' de practice ob ahms dat it requiahs kaint be dropped in a minute but it will take a genahratio to obercome eben a paht ob de lessons taught de boys who crossed de seas to sabe de wuhld from tyranny.

If I done had a dozen boys an' mah country needed dem as she needed all ouh precious boys in dis last wah, I'd send dem to de front, jest as hundreds ob thousands ob parents done sent dah boys. We kaint offah any 'pology foh defendin' ouh country an' ouh homes from murdah an' rapine but now ouh duty am eben moah plain, an' dat am dat ebery fathah an' ebery mothah an' ebery ministah ob de gospel, whateber his faith may be, owes it to dese boys who were taught to kill, to help teach them de real duties dey owe to dah country in time ob peace jest as much as dey owed it to dem in time ob wah to teach dem to fight foh dah country.

If we goes 'bout dis great responsibilty dat confronts us an' which am ouh greatest duty to mankind, we can help soften down de effects ob de past towahds dem dat needs it so much, an' help bring dem back to de point ob honesty an' righteousness.

Not all ob dese boys, not eben a big puhcentage of dem, dat went fo'th hab tuhned out bad, but 'nuf ob dem hab done so to make it necessary to help bring dem back to become law abidin' citizens. When we hab done dis, an' when we hab examined ouh own hahts, we will find de way back to de path ob righteousness once moah.

Let de choir lead in singin', "Mah faith looks up to Thee, Thou Lamb ob Calvahry," an' lookin' foh de blessin' we will be dismissed.

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REG. U. S. PAT. OFF.



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Saturn Rubber Endless Thresher Belts

They do not absorb moisture, have minimum stretch and long life.

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Figure your losses in the past and use better grates.

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Don't be tormented with dead fires and low steam.

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TRAVIS ROCKER GRATES will do the work.

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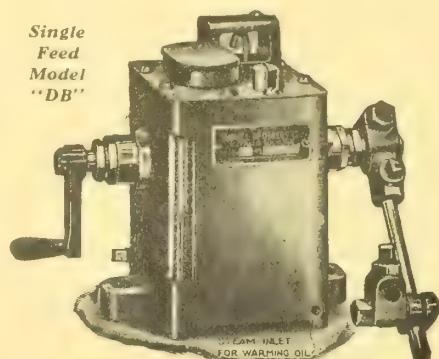
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Let Us Send You a Manzel Oil Pump On 30 Days' Trial

WHEN you receive it, put it on your engine and use it for thirty days. Try it in cold or warm weather, using heavy or light oil—against high or low pressure—running fast or slow on the road or standing still. Keep account of the small amount of oil you use—notice how smooth your engine runs. Use it with the feed cut down or at full capacity—try the hand attachment. Give it every reasonable kind of test. If you are not satisfied after thirty days' use that it is the most economical and reliable Oil Pump you have ever used, send it back at our expense.

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The "Manzel" is the sight feed oil pump, and you can see at all times just how much oil is being fed into the cylinder of your engine. You can stand thirty or forty feet away and count the oil drops as they are being supplied. There is no guess work about a "Manzel" Pump, and it will reduce your oil bills 30 to 60%. Furnished Right or Left Hand—Any Number of Feeds. Write today for catalog.



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J. J. Langmack, General Agent for Washington, Oregon and Idaho, 213 Gerlinger Building, Portland, Oregon

Boys and Girls

The Sunset Limited

O, Hush-a-by Land is a beautiful place
For sleepy small people to go,
And the Rock-a-bye Route is the favorite one
With a certain wee laddie I know.

The track lies on sleepers of feathers and down,

No accidents ever take place;
Though there's only one track, and there's only one train,
But it runs at a wonderful pace.

There are beautiful things to be seen on this route,

If you're good you may take just a peep;
But strange as it seems, they are seen best in dreams;

Be sure that you soon go to sleep.

Say good-night to the Sun, for he's off to bed, too—

He can't hear you, so just wave your hand;
The Moon and the Stars they will light up the cars

As you travel to Hush-a-bye Land.

So, quick, jump aboard, it is time to be off,
You have nothing to pay, you young elf;
Just think of the luxury, laddie, you'll have—

A whole sleeping-car to yourself!

—Booklovers' Magazine.

The Story the Toothbrush Told

BY WILBUR A. FISCHER

Jolly old Mr. Moon was shining through the window of the little white house on the hill. He lighted up a neat little room. He peeped around everywhere.

The clock struck twelve—twelve silvery-toned, tinkling strokes.

Suddenly a tiny voice was heard in the room: "Come on, fellows, let's play."—Mr. Moon saw that it was the toothbrush that spoke the words, and that scrambled from its hook over the wash bowl.

A comb and brush jumped from the dresser; water came from the faucet, the soap jumped out of the soap dish, and the towel hopped from its rack, and they all joined in a dance in the moon beams.

Pretty soon they got tired and sat down to rest on the hearth rug. "Let's tell stories," said one.

"Let Mr. Toothbrush tell his history," said another.

"All right," agreed the others.

And here is the story that the Toothbrush told:

I am a toothbrush.

I was made in a factory that had many windows and was light and airy. The workers wore neat clothing, clean and spotless.

My handle was made of celluloid, moulded by machinery, and little holes were drilled in it. Rubber that came from South America was melted and poured into these holes and stiff tufts of bristles were set in the rubber so that they would not come out. I was not touched by hands but was made by machinery.

After the rubber around my bristles had hardened I did not see the light of day for a long time; for I was packed into a little box and shipped, with many other toothbrushes, to a drug store and placed in a glass show case.

One day the show case was opened

and I was taken out in my box. I heard the voice of the druggist saying, "This is a very good toothbrush. It is sealed in the box; so I cannot show it to you. It is clean and sanitary and I recommend it."

I felt very proud and was "all puffed up" to think that I had come from this good factory. I would have thrown out my chest, but you know toothbrushes have no chests.

I heard the sweet little voice of a girl saying, "Oh, mamma, this picture on the box shows that the brush is a nice one. Please buy it for me."

Then the voice of a boy said, "Yes, and, mother, I want one just like it."

A motherly voice then said, "All right, Jack and Rose, I'll get them for you."

I was wrapped up and carried a short ways, I think, in the little girl's hand. Pretty soon the box was opened and I saw the light of day once more. Little Rose pulled me out of the box and held me up and looked at me and smiled at me.

I was hung on a little brass hook over the wash bowl, and left alone until that night. Little Rose took me off my hook, put some of Mr. Tooth Paste on me and began to vigorously brush her teeth, inside and out, up and down; and I made her teeth white and pretty.

Jack was washing his teeth at the same time. The children chattered away at each other.

Rose said, "Jack, aren't you glad that you joined the Modern Health Crusaders? I never knew that it was bad not to brush your teeth. I feel so much better now that mamma had my teeth cleaned and we have begun to keep them clean and white. And teacher says that they decay if we don't wash them, and that bad teeth make one sick."

"Yes," said Jack, "I am going to get to be a knight by keeping clean and neat and cheerful. I will keep the health rules; and that will make me a healthy boy, teacher says."

"I like my toothbrush," said Rose, looking at me.

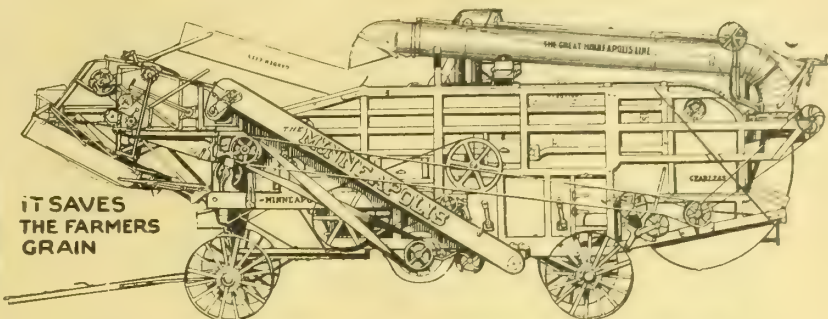
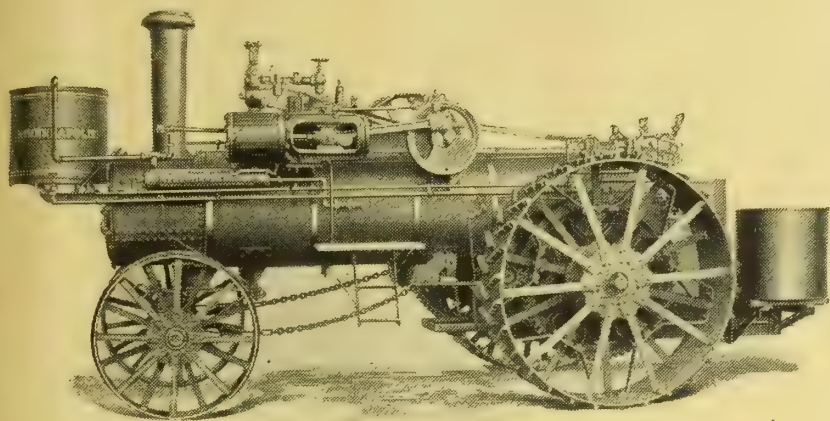
Do you blame me for feeling very good about how I would help little Rose to look sweeter and prettier than every before? Mr. Soap, and Miss Water, and Mr. and Mrs. Comb and Brush, and Mr. Towel, all of you were here before me; but I hope that you will welcome Mr. Tooth Paste and me as your companions.

"We will!" shouted all of them.

And then the clock struck one. So the soap jumped into the soap dish, the towel flew up onto the towel rack, the water ran back into the faucet, the comb and brush jumped up onto the dresser; and the tooth-



"The Great Minneapolis Line"



IT SAVES
THE FARMERS
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THE MINNEAPOLIS - THE POPULAR THRESHER

MINNEAPOLIS POWER (STEAM OR GAS)

For all kinds of traction or
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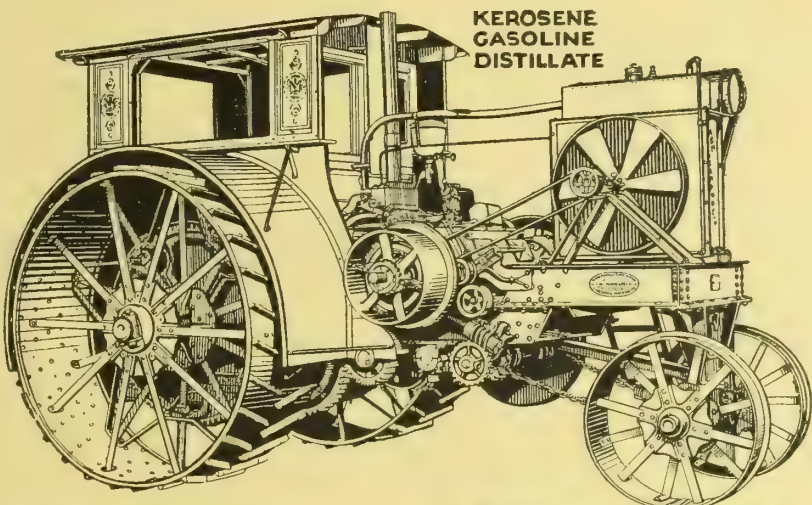
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Thoroughly Reliable
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ANY
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MINNEAPOLIS THRESHERS (BUILT IN 9 SIZES)

For threshing, saving and
cleaning all kinds of grain
and seeds. Are popular
because of the satisfactory
service they render both the
thresherman and farmer.

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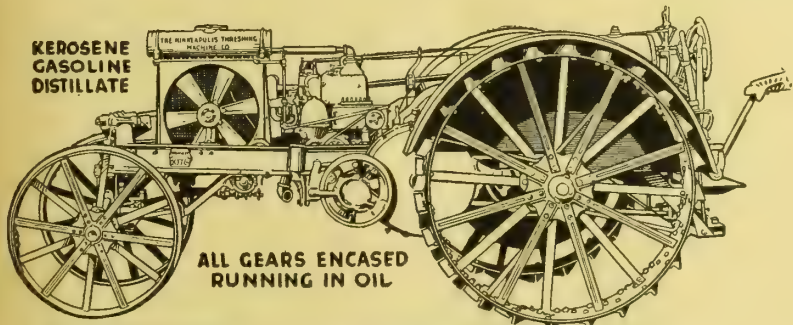


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You should have one of our catalogs which fully describes the complete Minneapolis line of power farming machinery. We will gladly forward one upon receipt of request and if you mention it a Thresher's Account Book will be included. No charge —No obligation—We want you to have them.

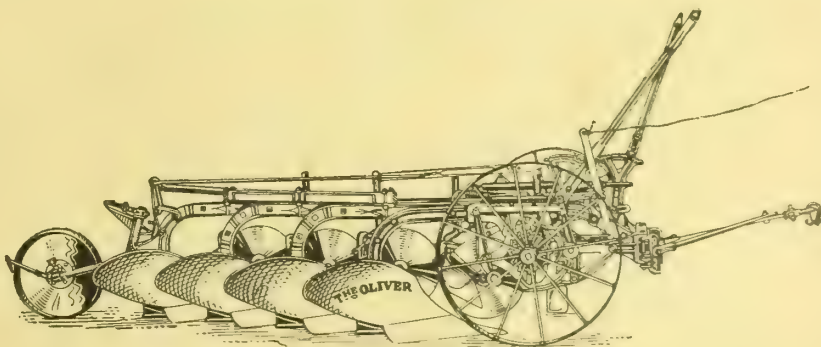


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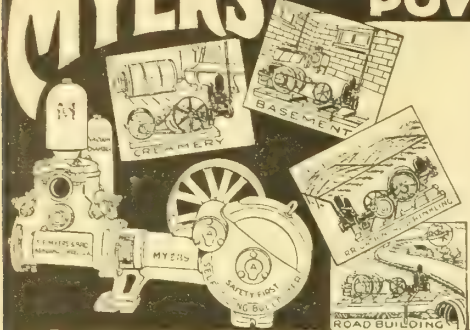
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FROM an economic, time and labor saving standpoint, handy water facilities head the list of modern improvements for home and farm. Think of the water used for household and stock purposes and for numerous other

activities. Water for this and that every day. An absolute necessity. Health and life, success and prosperity depend on it. Then why not have plenty, handy and easy to obtain?

MYERS "Honor-Built" SELF-OILING BULLDOZER POWER PUMPS will furnish you with an abundant supply for every need. Here are Pumps for operation by gasoline engine or motor that are the product of master pump builders. No others like them. Self-Oiling, Covered Working Parts, Large Valves, Improved Method of Power Application and other features simplify installation, eliminate frequent oiling, prevent accidents and breakage, increase capacity, reduce operation costs. For safety, economy and dependability, they are unequalled. Different styles and sizes meet capacity requirements.

Request copy of our 182 Page Pump Catalog. Shows this and many other styles of MYERS PUMPS for every purpose. Mailed to anyone without obligation. Ask your dealer or write us.

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175 ORANGE STREET ASHLAND, OHIO.

Threshermen!

If you want to make your customers happy—help them to save considerable time, money and labor—and take much grief out of the threshing period—tell them about the

Nall Pneumatic Grain Conveyor

It takes the grain from any place to anywhere. From wagon to bin—from bin to bin—or from bin back to wagon again. There is no shoveling or hand handling. Its operation is entirely automatic—automatic suction intake—automatic elevation, and automatic distribution.

And there are no damaged kernels as no grains pass through the fan.

The fan is left free to do its work and this fatal and costly defect of other machines eliminated. Operator may insert delivery hose in bin or granary and blow them full—then remove and insert intake hose and suck them empty.

Operated by any power. Grain cooled and sweetened during operation and heating stopped. Complete interesting details on request.

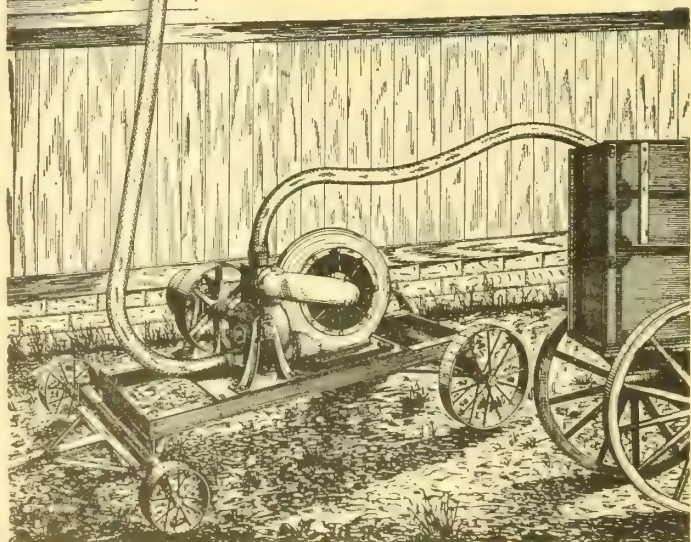
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Handles All Grains—

The Nall Pneumatic Grain Conveyor may be used to handle all small grains and shelled corn. Model of compactness. Portable. Can also be used for conveying other material. Light in weight and acts as dryer for grain threshed damp. Write for catalog.



Can make immediate shipment on receipt of orders.

Study at Home!

Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

brush hung himself onto his hook over the wash bowl.

Mr. Moon, way up in the sky, winked his eye and chuckled to himself, saying, "People don't know half the things that happen while they are asleep!"

From Our Boys and Girls

DEAR AUNT JANE:

I am a boy fifteen years old. I am in the sixth grade. My teacher's name is Enna Jones. We all like her very much. I have one mile to go to school. There are thirty-three in our school. My father takes The American Thresherman and Farm Power. He owns two 16-horse power Reeves engines and one 18-horse power Robinson engine. He has two separators, one Huber and one A. D. Baker, two McCormick corn shellers, one I. H. C. ensilage cutter, one fodder cutter, one Aultman-

of a mile from the schoolhouse. My teacher's name is Ade Johnson. This is my first letter and I hope I will see it in print. I haven't seen any letters from around here.

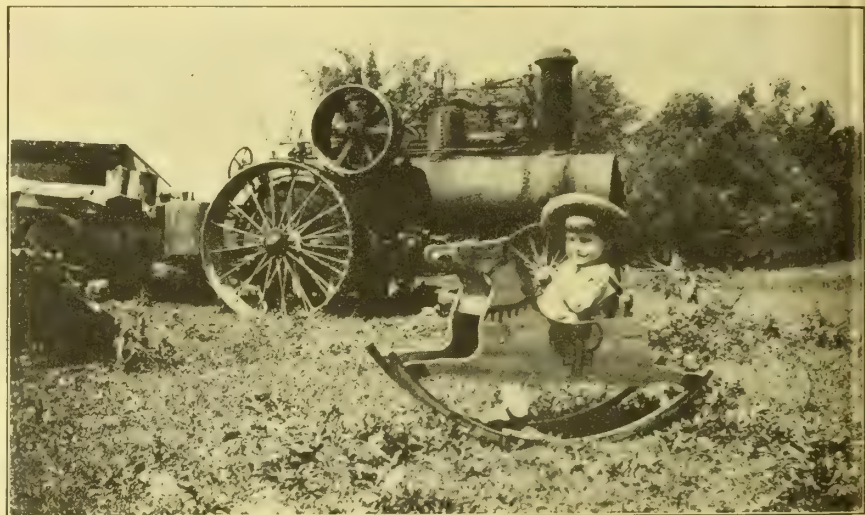
Your nephew,
ARNOLD HILLMAN.

Annandale, Minn.

(I hope the little lambs grow nicely, Arnold.—AUNT JANE.)

DEAR AUNT JANE:

I had began to think that you had forgotten me. I didn't tell you about my pets before because I did not have any. I have ten rabbits now, nine white ones and one Belgian hare. We have a cow and calf. My uncle has a donkey and I ride him very often. My papa bought me a new piano not very long ago and I am taking music lessons and I am learning fast. My papa has three trucks and one Overland car,



William and His Favorite "Pet."

This is a picture of William Hugh Brown and his favorite "pet." Of course you will think the "pet" is his "riding horse" but it is not. It is his daddy's "toot-toot!" William lives in Waverly, Ind.

Taylor clover huller, one 8-horse power gasoline engine, one Oakland automobile, six head of horses and ten head of cattle. I tend the cows and milk. I have two sisters and three brothers. Their names are Grace, Elizabeth, Harry, George, and John. We live on a farm of eighty-six acres.

Your nephew,

RALPH E. SHANK.

New Lebanon, Ohio.

(Glad to hear from you, Ralph.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a little boy seven years old. I have no sisters or brothers. I like to read the Children's Page. For pets I have a dog named Trix and two cats and one little lamb. We have twenty-six old sheep and nine lambs. My papa takes The American Thresherman and Farm Power. He has been threshing twenty-seven years. He runs a sawmill too. He owns a J. I. Case threshing outfit. We have a Regal car. I go to school most every day. I just live a quarter

two Fords and one Overland truck. School is out and I was promoted. I did not get to go the last two weeks because I was sick. We have a picture of my rabbits which I will send soon. LOUVENIA KUTERIM.

Bronte, Tex.

(I am looking for the picture of the rabbits, Louvenia.—AUNT JANE.)

DEAR AUNT JANE:

Well, how are you all? I'm fine. I expect you youngest members are all going to school. I quit last year, but was sorry I had to. One night they were to have a Shadow Social at our schoolhouse, but it snowed and stormed so badly that they didn't have much of a crowd. I didn't go. I had gotten all ready but I had to stay home as the blizzard was too bad. Maybe I will go to the next one. There is to be an oyster supper at the neighbor's soon. I hope everything stays good so we sisters can go. They have organized a Community Singing Club at our school house where everyone can come and sing. I must close for this time. If I see this letter in print I,

You Don't Know Where They're Going But They're On Their Way—Up
What?

PRICES OF FUEL AND GRAIN

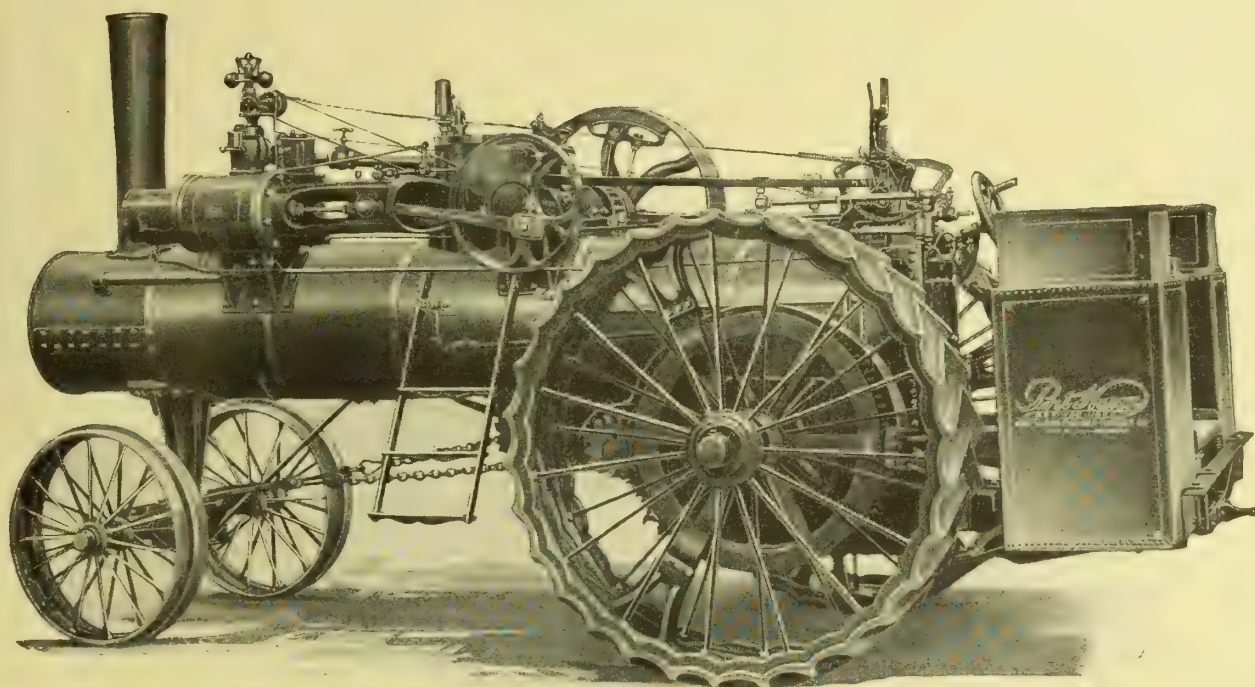
When the armistice was signed, nearly everyone expected to see prices quit going up—thought the peak had been reached—and that any changes in prices from then on would be downward. But they're still on their way—up.

Prices of Fuel and Grain Highest Ever

Fuel and Grain prices are the highest they have been for years. And this is all the more reason why all possible waste should be overcome. When they were cheap it didn't matter so much—but they are no longer cheap.

PORT HURONS

Save the Farmers' High Priced Grain and Fuel

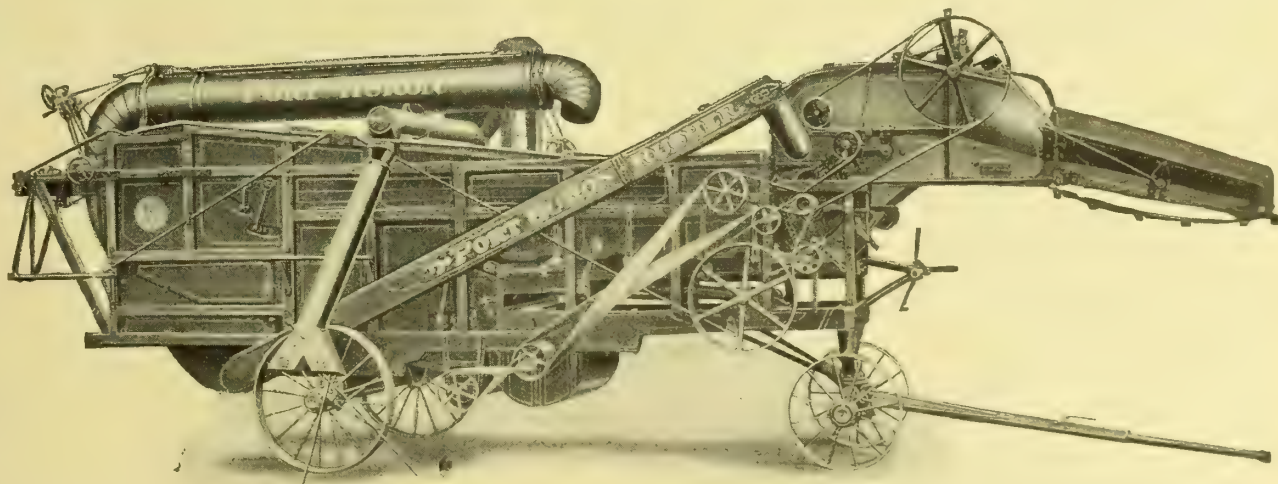


PORT Huron Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market to-day. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them.

PORT HURON LONGFELLOW HIGH-PRESSURE COMPOUND—2 SIZES: 19 and 24 H. P.

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor-Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.

The famous Mule-Kick Separation beats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing.



PORT HURON RUSHER WITH MULE-KICK SEPARATION AND RAZOR-BACK TEETH
5 SIZES—A SIZE FOR EVERY REQUIREMENT

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COST LESS—LAST LONGER

HOO-HOO Belting is made from extra heavy duck and has four rows of stitches to an inch. It is treated with a special compound that keeps it at all times pliable and unaffected by unnatural conditions, such as water, steam, heat, acid fumes, etc. It will not crack or harden and is of strictly uniform quality, carefully stretched and seasoned before leaving factory.

HOO-HOO Belting will transmit the maximum power, stand an unusual amount of abuse, which enables you to thresh more grain per hour. It is the highest class thresher belt manufactured.

HOO THRESHER

Net Cash Prices

Lgth.	Width			Lgth.	Width		
Ft.	In.	Ply	Each	Ft.	In.	Ply	Each
50	5	4	\$22.05	100	7	4	\$56.25
50	6	4	25.65	100	8	4	63.45
75	5	4	31.95	125	6	4	61.20
75	6	4	37.35	125	7	4	69.75
100	5	4	42.30	125	8	4	78.75
100	6	4	49.50	150	7	4	83.25

Terms, cash to accompany order. Freight prepaid.



GUARANTEE

Belt should be run in the center of the pulley and should not be held in place by any object that will injure or break the edges.

Results of overloading, injurious use of belt dressings or chafed, frayed or nicked edges do not constitute defects.

Positively no allowance unless claims are made within 30 days from date put in use and belt returned to maker, freight prepaid, with the guarantee tag attached.

We will replace any belt proving defective in material or workmanship.

HOO BELTS

Net Cash Prices

Lgth.	Width			Lgth.	Width		
Ft.	In.	Ply	Each	Ft.	In.	Ply	Each
150	8	4	\$93.60	160	8	5	\$124.65
150	9	4	103.50	160	9	5	137.25
125	7	5	87.30	150	8	6	140.85
125	8	5	98.10	150	9	6	155.25
150	7	5	103.95	160	8	6	149.85
150	8	5	117.45	160	9	6	165.60
150	9	5	129.15				

Terms, cash to accompany order. Freight prepaid.

If interested, we shall be pleased to quote prices on "HOO-HOO" Canvas Stitched Belting in Rolls, Oak Tanned Leather Belting and Lace Leather. Also any length, width or ply endless belt not mentioned above. 5% discount for group purposes of five or more belts.

Please Mention Length, Width and Ply Required.

National Leather Belting Company, 342 East Thirty-Eighth St. New York City

Mention The American Thresherman and Farm Power

will come again. Before I say good-bye, I'll ask the members to all write to me. I'll answer every letter received.

LAURA C. KIRSCHBAUM.

Granite Falls, Minn.

(The blizzards are gone for this year, Laura.—AUNT JANE.)

DEAR AUNT JANE:

I am a little boy of two years. My papa is a thresherman and I am exceedingly fond of machinery myself. He owns a Russell engine, a Baker separator, and a Birdsell sawmill. He used to own a Birdsell clover huller and a McCormick fodder shredder but sold them to my uncle last year. I have several pets and am sending my picture which was taken with the "toot-toot" I love so well. Please put it in your paper this month if possible so I can surprise my daddy. He takes your paper and we like it fine.

Your nephew,

WILLIAM HUGH BROWN.

Waverly, Ind.

(Thank you for the picture, William.—AUNT JANE.)

DEAR AUNT JANE:

This is my first letter to you. I am a boy eleven years old. I go to school in the country and I am in the sixth grade. I live on a small farm of thirty acres. We have four head of horses and twelve head of cattle. My

father takes The American Thresherman and Farm Power. He owns an 18-horse power Wood Bros. engine. My uncle owns an Aultman & Taylor separator. Papa and my uncle thresh together. I have a brother and one sister. Their names are Carl and Ruth. For pets I have a cat and a horse. The cat's name is Frisk and the horse's name is Molly. We have a Dodge car and expect to get another, one of these days. I hope to see my letter in print.

Your nephew,

HENRY WOODFORD.

Davenport, Ia.

(Do you help to care for the cattle and horses, Henry?—AUNT JANE.)

DEAR AUNT JANE:

I am writing you my first letter. I am a boy. I will be twelve years old September 5. I like to read The Children's Page. My papa takes the American Thresherman and Farm Power. For pets I have a good dog. I have two brothers and three sisters. My papa owns a threshing outfit. We live on a farm. My papa owns about two hundred acres of land. We have a Studebaker seven passenger car. We like to go to the Sunday school. I go to school. Have about one and one half miles to go, but I have a pony to drive. We have six horses. I like to work them. I like to help my papa work. We have fifteen large shoats, seventeen

smaller ones. I like to milk the cows and hunt new hens' nests. We get lots of eggs.

Yours truly,

J. HOWARD ACKLEY.

West Finley, Pa.

(I'd like to hunt the eggs with you, Howard.—AUNT JANE.)

DEAR AUNT JANE:

I would like to join your circle. I am a girl eleven years old. I have four sisters and three brothers. I live on a farm of one hundred and twenty acres. My father takes The American Thresherman and Farm Power and I enjoy reading the Children's Page. My father owns an Advance-Rumely outfit which consists of a 30-60 OilPull, separator, corn husker, clover huller and silage cutter. We also own an Auburn automobile. For pets I have a dog, two cats and four little calves.

Your niece,

Shiloh, O. MARY PITTENGER.

(What a fine big family yours is, Mary.—AUNT JANE.)

DEAR AUNT JANE:

I am a girl twelve years old and my daddy is a minister. I live in town and am in the seventh grade. I am visiting my aunt, uncle and little cousin, Anna Doris. My uncle takes The American Thresherman and Farm Power and has been a thresherman for twenty-five years. I have

no pets as I do not live in the country. I have a brother named Howard. He is nine years old. I am sending Anna Doris's picture as I want to surprise my uncle.

Your niece,

Lois Leeper.

St. Clairsville, O.

(Thank you for the picture, Lois. I hope you saw it in the December magazine.—AUNT JANE.)

DEAR AUNT JANE:

So many of the boys and girls have been writing to you that I thought I would write too. I am a little girl ten years of age and I have one sister and seven brothers but one is dead. His name was Evert. My other brothers' names are Edwin, Arthur, Oscar, Ludwig, Danny and Teddy. Josie is my sister's name. Three of my brothers have been in the war. Their names are Edwin, Arthur and Oscar. I go to school every day. My big brother takes The American Thresherman and Farm Power. I like to read the Children's Page. We live on a farm and have eleven cows and six horses and a dog whose name is Snookum and three cats. My big brother runs a threshing machine. Hoping this letter will be in print, I am,

Your niece,

ESTHER HOLMQUIST.

St. James, Minn.

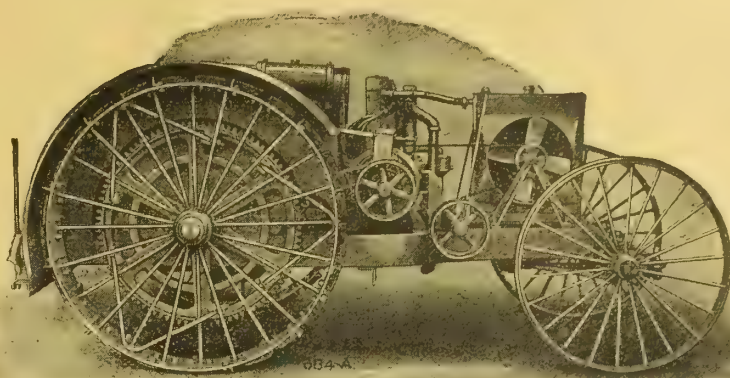
(Here is the hoped-for letter, Esther.—AUNT JANE.)



When You Buy a FRICK Tractor

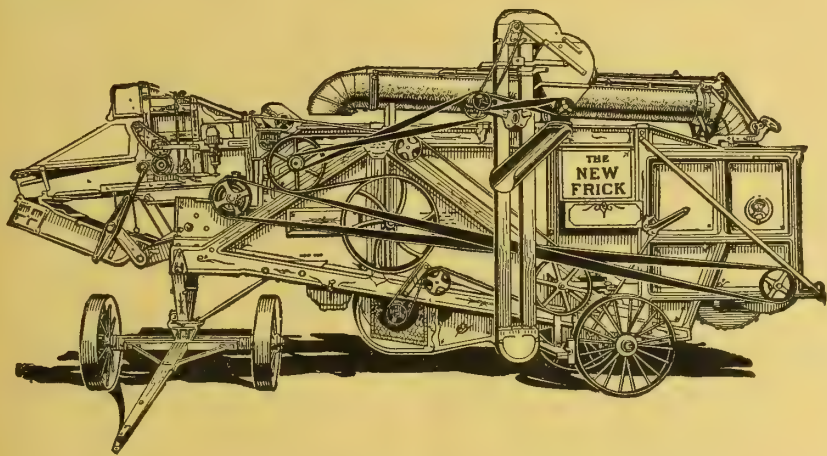
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Trucks to the Rescue

(Continued from page 7.)

do carry is handled in a generally unsatisfactory manner to patrons and frequently without profit to themselves. Whether the original reason for this condition was the manipulation of securities, legislative restrictions, government ownership, war waste or other causes, is of less concern to us now than the fact that the railroads are not in a position, through their own efforts, to promise relief.

Experience has shown that it takes from twenty to twenty-five years for a new territory to develop sufficiently to put a railway line upon a paying basis. With depleted treasuries, an investing public afraid of railroad securities and the immediate need of half a billion dollars for repairs and maintenance alone, it is logical to assume that no new lines are under consideration.

Railways follow the valleys. As a result, there are today millions of acres of fertile land in this country, low in value and unproductive, because they are located in the hills. In the Ozark Mountains there are many territories inaccessible to the railways where there is no incentive to production. Fertile land is low in value, the country losing the crops that it needs and the owners losing the income to which they are entitled and which their acres would earn if there were means for conveying the produce to market.

Through financial failure, trains have ceased to operate over many lines, isolating good towns and productive farming communities. Instances of this occur in southern Missouri, Illinois and Iowa. Production has dropped off, business investments have been jeopardized, property valuations lowered and the communities lost to the country as live markets.

Former agreements between railroads in which one road agreed to stay out of the territory served by another in return for the same favor to it, have left many territories without transportation. Where such conditions have existed, parallel roads are far apart, leaving vast areas between them, the products from which can be marketed only by long and expensive hauls over bad roads. Production in these localities is small and land values low.

It is impossible for a railroad to handle small consignments or short hauls in a satisfactory manner. It is said that less than carload shipments are carried at an actual financial loss.

In many localities motor trucks are developing and connecting distant territories with the railroads, taking over the short haul and small shipment business and in other ways proving their worth in the solution

of our transportation problem. It has been said that "if you regard the railroad as the long arm of commerce, you must recognize the motor truck as the fingers which reach in here, there and everywhere to pick up the loads and place them at their destination."

A coöperative truck association in Maryland hauls all classes of products between Bel Air, Churchville, and Baltimore, in a more efficient manner than railroads have in the past, and, in addition, carry many things that it would be impractical to ship by railroad at all. The Callan Bros. Company operates a large fleet of trucks throughout Pennsylvania, Delaware, Maryland, New York, Connecticut, and Massachusetts. It is growing rapidly and the service it gives the people is exceptional. Twenty lines operating in the Washington-Baltimore district average a thousand tons daily of all classes of goods. A Chicago concern has seventy trucks running on daily schedules between Chicago and neighboring cities. One of these trucks will stop at a farm on signal and pick up as small a package as a pound of butter or a dozen eggs. Lord Northcliffe states that food for London was assured and the railroad strike beaten by motor trucks used for general transportation. These instances are but representative of what is taking place throughout the country every day.

It is estimated that thirteen per cent of the total tonnage of the United States is carried today by motor truck. This percentage is growing because truckportation is a success and confers a real benefit on every class of citizen.

The railroad is normally a long distance carrier. In this class of hauling it gives the greatest satisfaction and earns the largest dividends. By the proper use of trucks the short hauls could be taken from the railroads, making them, in fact, long distance carriers. Under such conditions solid trains could be routed from one center of distribution to another; New York to Chicago, Chicago to Omaha, St. Louis to Dallas, Denver to San Francisco. There would be no costly time-consuming stops, cutting out cars here and there enroute as the intermediate shipping would be taken care of by trucks from each of the distributing centers. Quicker, cheaper and better transportation would result and the railroads would become a real help to all the people whether living on a railway or not.

The trucks which handled the distribution from the large cities would penetrate hitherto undeveloped territory, open up city markets for those communities through which

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railroads have ceased to operate, and develop the hill country in which there are few railroads. Thus would the citizens of such localities be provided with a profitable market for products they could, but do not raise and a delivery system for goods from all parts of the world.

The motor truck is fast, economical and dependable. It hauls direct from the shipper to the receiver. By minimizing handling, it cuts the cost of labor, packing and time. Maintenance and operation are inexpensive and spoilage of perishable products is eliminated. Food products from the farm are delivered many miles distant as pure and as fresh as when loaded. Merchandise is received in rural and suburban districts when it is needed mostly. Over common roads, live stock is marketed up to sixty miles so efficiently that the reduction in the loss from shrinkage more than pays the total cost of transportation. This is proven in the primary stock markets every day. Over hard roads the hauling radius would be much longer. Wherever motor trucks have come into general use, costs have been lowered and service improved.

The successful operation of motor trucks, however, depends upon the development of hard surfaced roads. To relieve the congestion of the railroads and secure for the people the reduced costs and other benefits possible, it is necessary that we appreciate this fundamental fact. Just as the great development of the West followed the construction of the first transcontinental railroad, the next step in progress is going to follow the building of a highway system of hard surfaced roads. In this way only can we lay the foundation for an adequate system of transportation for the coming years.

As this article is being written, the largest textile mills in the country, one of the largest groups of shoe factories and several other business concerns of large size are working but four days a week. It is also stated that automobile factories are averaging only about two-thirds of their normal production. From many different lines of business in all parts of the country come the same reports. In almost every instance the inability of the railroads to keep industrial plants supplied with a steady volume of raw material and to distribute a regular output is given as the cause of the lessened production. Because of these shut-downs, thousand of employees are thrown out of work, bringing home to them in its cost in dollars their dependence upon transportation.

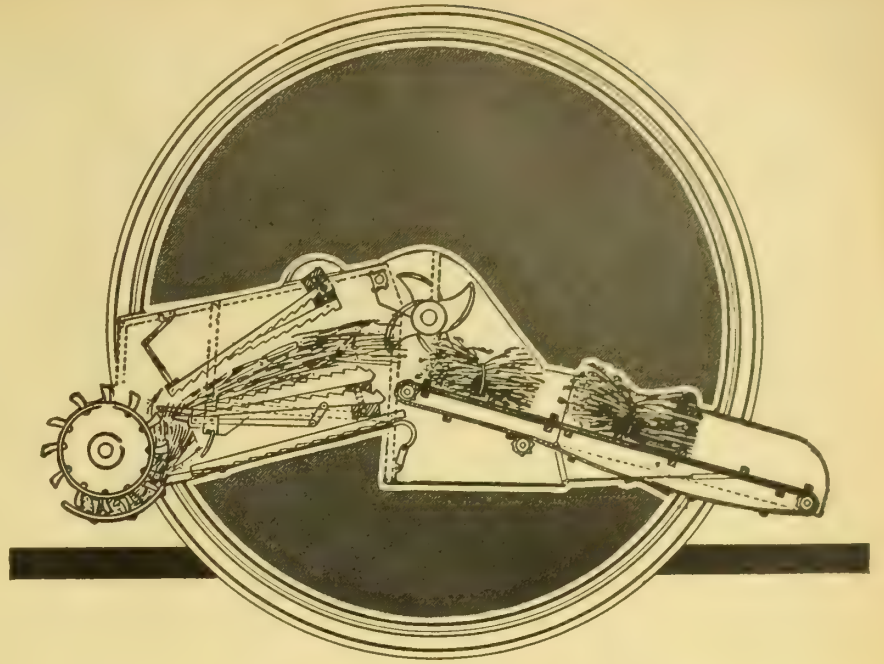
Land is high or low in value according to its capacity for earning profits for its owner. There are millions of acres of fertile land in the United States today, unfarmed because there is no economical way to

market the crops. With hard surfaced roads and highway trucking, this land would increase in value, earn profits for the owners and high wages for employees, produce food-stuffs that the entire world is in need of and add new life to the communities in which it is located.

In the time and effort necessary to market his crops, the farmer living twenty miles in the country on a hard highway is closer to the city than the one living but ten miles away on a poor road. At a minimum of expense the farmer is able to market his crops when the market conditions are most favorable, regardless of the season of the year or the condition of the weather. Hard roads thus bring greater earnings and increased land values. In many communities it has been demonstrated that one hundred dollars an acre land was so enhanced in value by the hard surfacing of roads that it was possible to borrow as high as two hundred an acre on it. It may be that the owner of property does not anticipate that he will either desire to sell or to borrow, but the added valuation is a worth-while asset nevertheless.

The farmer would be very directly affected also by the reduction in the cost of the manufactured articles he has to buy. Coming from remote sections of the country, the clothes he wears and the implements he uses are raised in value by transportation charges on both the finished products and the materials from which they are made. The lessening in the shipping costs would reduce materially the retail prices.

The inability of the farmer to retain hired help and to keep his own children upon the farm after they have secured their education, has caused a serious shortage of farm labor and reduced production. The tendency to move to the city is a protest against the unattractiveness of farm life and an effort to secure the social benefits of the city. With a growing city population to feed and less rural labor to produce that food, it is imperative that some action be taken to halt this movement or the already high cost of living will be increased in the future rather than lowered. As wider and more attractive social advantages follow the development of good roads, this city-ward movement would be hindered by such development. With hard roads over which to travel, the theaters and other places of recreation and amusement in the city are brought within easy and quick access of the farmer and his family. In fact, a farmer living upon a good road ten miles from a city can make the trip in less time and with greater comfort in an automobile than can the suburban residents in a city go from their homes to the heart of the city by street car. With the opportunity of taking part



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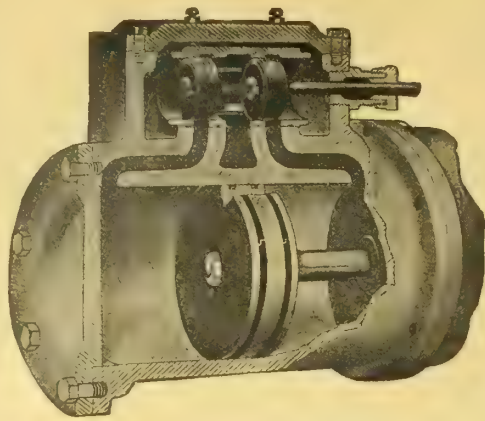
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in the social life of neighboring cities and towns, farm life would be more attractive and there would be less desire to seek enjoyment elsewhere.

Because of the poor roads with which a doctor contends at certain times of the year, it is frequently difficult for the rural family to secure medical attendance when needed. Good roads would make the doctor's arrival, when needed, a certainty and reduce the cost of such service.

Good roads bring greater moral and spiritual advantages. It is possible to attend church without the long and tiresome trips now necessary. Ministerial visits are made easier and more frequently.

With the ability to travel greater distances in the same time and the certainty of being able to make these trips at all seasons of the year, fewer schools would be necessary. The money which is now used in a township, for instance, to support many schools of small size and few advantages, could be centered in one large school which would offer to rural students a training on a par with the best in the city.

The Stacker Harvester

(Continued from page 10.)

moving all side pressure from the stack. The stack is now freely resting on the platform of the stacker, which is balanced in the center over the axle. A slight push of a lever by the operator disturbs the balance of the stack. The front end of the platform raises while the rear end goes downward until it rests on the ground. As soon as the rear end of the platform reaches the ground it stops, while the main part of the stacker continues to move along with the harvester. The stacker continues to move away from the platform upon which two stout hooks project downward; these hooks catch upon the axle and drag the platform from under the stack and as soon as the weight of the stack is removed from the platform it returns automatically to its original position. While the stack is being deposited, the teams continue without slacking their pace.

"In the center of the platform is an air-space former, which, when the stack is deposited upon the ground, leaves an air-space six inches wide and twenty-two inches high running the entire length of the stack. This air-space permits a circulation of air through the bottom of the stack and insures the curing of the grain. As the machine continues around the field, these stacks are deposited from eighty to one hundred and twenty rods apart, according to the stand of grain being harvested. As the machine makes its second round, the stacks are set down almost opposite the first ones so that when the grain is all cut the stacks stand in rows across the field."

Good roads would bring to the country the use of motorized fire equipment and the same protection for life and property that is now enjoyed by residents of the cities.

Good roads would provide routes for motorized bus lines, running on schedule in all directions, literally duplicating for the farmers the advantages of a street car system.

Truck lines, also running on schedule, would bring to every door a delivery and a shipping service, eliminating long trips to market in inclement weather or during busy seasons.

Hard surfaced roads are an investment, not an expense. The history of every good roads movement proves that the original investment is returned quickly in higher valuations and that the earnings on the investment are large and continual—earnings that consist of both material welfare and happiness.

It is the duty of every citizen to support such good roads movements, as are being made in his locality. By so doing he not only benefits himself but helps in bringing to all an era of greater opportunity.

These small stacks are carried to the thresher in their entirety by means of a form of sweep or "bull" rake designed for the purpose, and with a thresher fitted with a self-feeder made for handling loose grain, this method of harvesting is cheap, safe, and easy. A further advantage of this method is the possibility of plowing the land immediately after the grain is cut. As the stacks are placed in rows across the field and take up but a few narrow strips, the remainder can, of course, be plowed at once, something that would be impossible if the grain was in standing shocks distributed over the field. The makers further claim that this stacker can be arranged to make additional air-space in the stack, and that, when so fitted, it has given satisfaction in handling alfalfa, and that it is also successful in the harvesting of flax.

The second device on the list is the stacking truck or "barge" devised by C. W. Hart, "the founder of the tractor industry," and used by him in a farming enterprise in Montana.

This is a large four-wheeled "barge" or stacking bin, mounted so that the major portion of the load is carried on the rear axle, the front wheels being but a front-truck with a narrower tread. This barge or stacking truck is larger than the Graham-Roach stacker, having floor dimensions twelve by twenty feet. Instead of a modified binder with an extended elevator, a regulation grain header is used and the whole assembly is intended to be drawn by tractor power. It was the practice

with this outfit to drop the stacks in rows across the field and in groups of three, otherwise the operation of these two machines is practically identical. They both require the service of but two men, a driver and a man inside the truck or stacker to build the stack. Whether or not any steps have been taken to manufacture this Hart stacker as a commercial proposition the writer cannot say, but it is unreasonable to expect that the matter will be allowed to lie dormant.

Some differences between the Graham-Roach and the Hart systems will be noticed. The stacks made by the Hart device are the larger and as they are placed in groups of three, at threshing time the threshing machine moves down the row of stacks making a "setting" at each three stacks. There is a form of traveling tractor thresher with a self-contained power plant that has been used in Canada that would seem to be particularly well adapted to this job, and it is possible that a combined harvester arranged (as is frequently done) to work as a stationary thresher would prove successful, otherwise, the repeated moving of the threshing rig from one stack group to another would appear to be at some considerable loss of time.

The smaller Graham-Roach outfit does not require as much power, the stacks are smaller, the grain may be cut earlier and green straw and other crops may be cured out in the small air-spaced stacks. As the small stacks are carried to the thresher, but one "set" of the threshing rig is necessary, and, altogether, this system would seem to be the better adapted to a wider range of service, and of territory, to grain growing on a smaller scale, and to prevailing threshing methods than is the Hart. It would possibly be inferior, however, in wholesale grain growing. Both systems have their merits.

The next device on the list is the Bajac "Nouveau Chariot-Moule," the product of one of the leading farm implement makers of France.

The new chariot-moule (liberally translated, wagon or truck-mold), to translate the maker's description, is constituted by a large cage with a metal frame and uprights of wood supported by six wheels of which two are those on the pivoted fore-truck; two others more large at the middle of the sides of stub axles (that is to say, without traverse axle), and finally two smaller caster wheels that merely carry the rear-opening panel doors. This device is primarily designed as a hay harvesting apparatus, the stack being built in the cage as it is drawn about the field, and the whole affair is then hauled to the place selected for the permanent location of the stack. The rear doors are opened, the

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30x3 1/2	7.00	2.00	33x4	9.00	2.75	35x5	13.00	3.60
31x3 1/2	7.25	2.10	34x4	9.25	2.85	36x5	13.25	3.70
32x3 1/2	7.50	2.25	34x4 1/2	10.50	3.00	37x5	13.50	3.75
31x4	8.50	2.50	35x4 1/2	11.50	3.15			

Send \$2 deposit for each tire and \$1 for each tube ordered, balance C. O. D. Tires shipped subject to your examination. State whether S. S., C. L. (Q. D.) plain or N. S. is desired. All same price.

NATIONAL GOOD-WEAR TIRE CO., 1113 Washington Blvd., Dept 211, CHICAGO



Reserve Space At Once!

NATIONAL TRACTOR

and Implement **SHOW** of The West

Sept. 20-26 Los Angeles Sept. 20-26

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First Great Tractor Show on Pacific Coast!
The West's Greatest Implement Show!

More than 300,000 Sq. Ft. of Exhibition Space in beautiful sycamore grove convenient to heart of the wonder city!

Special Section for Farm Trucks and Trailers. Extensive advertising campaign will bring record-breaking attendance. Prosperity reigns on the Pacific Coast. Get your share of the waiting business!

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Under Auspices of
Implement & Tractor Dealers Association of Southern California

Mention The American Thresherman and Farm Power

floor bars drop at the rear and the stacker is drawn away, leaving the stack deposited on the ground. There is apparently no reason why this machine could not be used together with a header in the harvesting of grain, or even with a sheaf gatherer or shock loader for stacking grain cut with a binder. The makers recommend that in stacking green hay that a series of wooden triangles be placed in the center of the "chariot" which "*formant une cheminee d'aeration*" and are allowed to remain in the center of the stack. This French stacking truck is cleverly designed and is not without advantages of its own.

A more simple affair than any of the foregoing is the Ewing hay truck. The writer is the proud possessor of one of these devices. This is merely a wooden frame or platform seven and a half by sixteen feet mounted on two twenty-eight-inch steel wheels the axle being placed very near the middle of the truck. The frame is open, two-by-fours being placed lengthwise across the frame at intervals of fifteen inches. Supported by four-foot six-inch uprights, placed at the corners and midway of each side, is an upper deck of the same dimensions, and a ridge pole is supported by higher uprights placed in the middle of each end. This truck is intended to be covered with a canvas under which the alfalfa or other crop is cured in safety from

both sunburn and rain. The crop is not dumped but remains on the truck until cured. This affair was originated by a Kentucky alfalfa grower who had built one hundred and forty of these trucks for his own use, harvesting four cuttings each season and baling direct from the truck. The front wheels of a wagon are used for hauling the trucks about, and it is claimed that enough alfalfa to make eighteen hundred pounds dry hay can be cured on each truck at one time. As these trucks are simple and comparatively cheap, and as there are no moving parts to wear out, they would last a lifetime. A fleet of them could well be considered a permanent investment and the idea is more practical than would at first appear.

This list may well be completed by the inclusion of what is termed the Collier "harvesting machine." This is more properly a side-delivery crop loading apparatus, that will pick up any hay, grain, or other crop from swath or windrow and that would seem to be ideally adapted to loading into either of the stacker trucks, the French chariot-moule, or the Ewing hay truck. This loader may readily be mounted on any wagon gears from which it is also as easily removed, and it is apparently a device of merit. It is also possible that at least one design of sheaf loader in use in Canada might be used to load these

stacking trucks in handling bound grain cut with a binder.

There are two possible serious objections to the use of these stackers in the harvesting of crops. The one is, the danger of the loaded truck cutting down and becoming mired in soft ground, as nearly all the weight is carried on two wheels, and it is also possible in this connection, that they would occasionally cut up and injure the land with their wheel tracks. This difficulty can, of course, be overcome by increasing the tire width of the carrying wheels. In the Graham-Roach machine, at least, the wheels would seem to be of ample size to carry the stack on any soil where any other harvesting machine could be used.

The other objection does not apply to the Ewing hay truck, but only to the other machines that deposit the stack on the ground. This is the injury that might possibly be done to a part of the stack through its resting directly on the damp ground. As is well known, it is the practice of farmers in building a stack of either hay or grain to place it on a stack-bottom of old boards or timbers that prevents the crop from coming in contact with the soil and also very frequently provides for air circulation under the stack to aid in its curing. Stack-bottoms of this nature could be built under the Bajac chariot-moule as

soon as it was drawn into position and before the stack was discharged, and this difficulty surmounted. The best that could be done with such devices as the Graham-Roach and the Hart stackers would be to place a layer of waste hay or straw on the floor of the stacker that would serve as a stack bottom when the stack was deposited, a new layer of straw being placed in the stacker previous to the loading of each stack, a loaded straw wagon being maintained convenient to the stack rows for this purpose. It is probable that only in extreme cases would such an expedient have to be resorted to.

As an afterthought, I will take the liberty of giving mention to a British agricultural idea that may prove to be a valuable adjunct to the stacker-harvester methods—that is, stack or, as the English say it, "rick" drying by means of an engine-driven centrifugal fan blower.

An English farmer, a Mr. J. E. Newman, of Pershore, has made experiments using a six-inch centrifugal blowing fan driven by a 2-horse power petrol engine, blowing air through a wooden pipe made of planks six inches wide and sixteen feet long, into the center of ricks built eight by five yards. The pipe was built into the rick on a slant so that the end of the pipe discharged the air into the center. Ten ricks were so treated! Three of the ricks were put

up with the clover, which was tall and in bloom when the wheat was cut, still quite damp. The ricks did not heat. Another rick was found to be at a temperature of seventy-four, which half an hour after the fan was started fell to fifty-six, and was the same as the outside temperature. Each rick was blown into for about sixteen hours in two terms of eight hours each, about a week apart. The engine and fan were easily moved from rick to rick. That there is much practicality in this idea is open to question—but if it is possible to stack either a hay or a grain crop within a few hours after cutting, and to assure the curing of

the stack safe from all danger of heating at the cost of a few cents worth of gasoline—it is an idea not to be thoughtlessly discarded.

It is obvious that all this machinery is adapted not only to the handling of grain crops, but to the harvest of alfalfa or other hay, beans, and, in fact, any and all crops that are conserved by stacking. Their use will, in preventing the loss of grain and hay crops from exposure to rain, eliminate one of the most serious risks of farming, and they will, should they fulfil their promise, have no small part in the building of a new farming that is pre-eminently a business and not a gamble.

Talks with the Manufacturers

What the Truck Factory Men Say

RECENTLY one of the editors of the Clarke publications visited a number of the truck factories. In the district bounded by Toledo on the northeast, Cincinnati on the southeast, Evansville on the southwest and Chicago on the northwest, over twenty motor truck factories were visited. Representative men of these companies were asked about the farm truck. Their views were interesting, and their view-points differed widely. With their permission, we are giving the following opinions of an even dozen. As you notice, Ohio, Indiana, Illinois, Kentucky and Wisconsin are quoted.

E. F. Seffing, Graham Brothers Motor Truck Company, Evansville, Indiana: "We have decided that the one and one-half ton capacity truck is the ideal size for the farm, and are making this size only. The modern farmer demands a fast truck and we have combined lightness with strength to give the greatest speed possible in a commercial car. Our present estimates are that one-third of the trucks we produce this year will go direct to farm users of trucks."

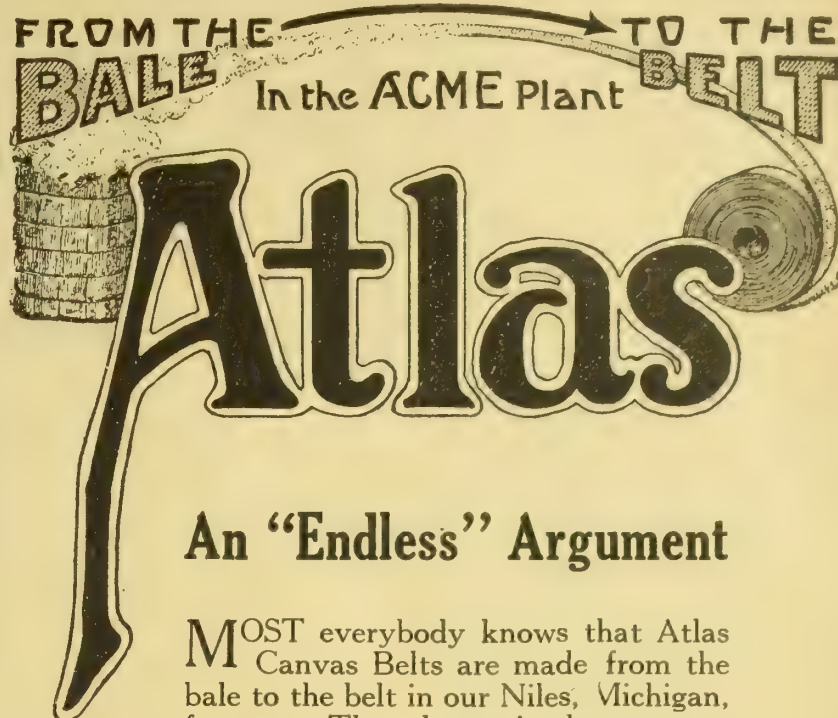
E. R. Downes, F. A. Ames Company, Incorporated, Owensboro, Kentucky: "I am positive there is a fine future for the well-built truck unit. Many farmers have good motors of various passenger car models and we are enjoying a growing demand for well-built units, with cabs, to transform these old cars into good trucks. The wheat and oil belts of the Middle West show a strong desire for this sort of car. Oklahoma and Kansas are using them during the transportation crisis of the 1920 harvest."

our attitude has been to let our truck output grow with the demand. This demand is increasing, and the increase comes largely from agricultural lines of work. The northwest especially seems to be wanting trucks."

H. H. Southgate, U. S. Motor Truck Company, Covington, Kentucky (P. O., Cincinnati, Ohio): "We have yet to be convinced that there is really a general farm truck. We have never specialized in the light truck field, and our efforts to reach the farm user with the heavier trucks have convinced us that other lines of business are more accessible. Other industries have demanded more trucks than we can make in 1920."

W. O. Spinks, Armleder Company, Cincinnati, Ohio (home address, Atlanta, Georgia): "The farmers of the South are ready to buy trucks that meet with their needs. Not all farmers need pneumatic tires and it is unwise to abandon solid rubber tires where the local needs are satisfied by the cheaper tires. The high centers of many hilly southern roads demand the use of high clearance axles and extra strong springs, while all universal joints should be enclosed to prevent damage from grit and sand. The one-ton truck is the best allround capacity for the average southern farmer, although a few large planters can use the two and one-half ton truck to advantage."

H. V. Evans, The Gramm-Bernstein Motor Truck Company, Lima, Ohio: "The farmer can be reached by proper methods, and the present crisis in railroad transportation convinces us that the era of the farm truck is closer at hand than some manufacturers believe. We were pioneers in the truck field and our firm can remember when test tours and expensive advertising were necessary to make any man with hauling problems listen to the truck maker. Some pioneers are necessary in the farm field and we are so sure of the farm truck field that we are willing to



An "Endless" Argument

MOST everybody knows that Atlas Canvas Belts are made from the bale to the belt in our Niles, Michigan, factory. They know it, because we never get tired of telling it.

There's a reason, of course, for playing this up so strongly. We want to emphasize that they're our belts through and through and that, consequently, we are the better enabled to back them up with our unlimited guarantee and entire resources.

"From the Bale to the Belt" is our bond or promise of sureness and dependability and flawless uniformity.

Think of what this means to the belt buyer. The Acme Belting Company is reputed as a "keeper of promises." Its word is good.

YOU should know the true economy of Atlas Canvas Belts. You should know how much better work you get out of them, how much more wear, how much more satisfaction. Their trouble-free performance spells economy. You should know and try Atlas. For until you do, you're passing up the best "buy" in farm belts.

IT'S not the easiest thing in the world to buy belting. The surface doesn't tell the story. How assuring then to know and to remember that Atlas Canvas Belts are always good.

Sizes for every purpose. Shipped direct or through your dealer.

Acme Belting Company

Manufacturers

Niles

Michigan

FARM BELTS

More
Service
for
Your
Dollars
The
Record
of the
Birdsell

BIRDSELL CLOVER AND ALFALFA HULLERS— THE BEST IN THEIR LINE

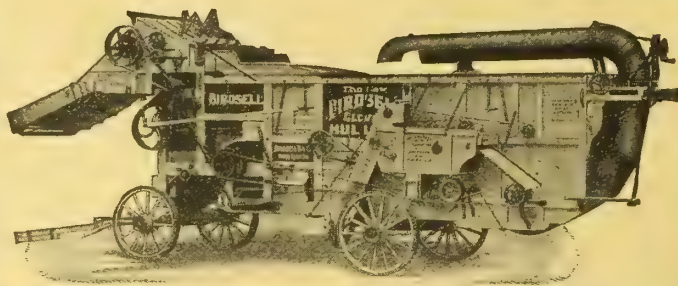
AND WE CAN MAKE PROMPT SHIPMENT

3 Sizes Clover and Alfalfa Hullers

Size 1 Clover 30"x36"
" 8 " 36"x44"
" 9 " 40"x52"

Size 3 Alfalfa 30"x36"
" 8½ " 36"x44"
" 10 " 40"x52"

Owing to a Shortage of Flat Cars Shipments are Sometimes Delayed—
Order Now—Dont Delay



BIRDSELL MFG. CO.,
South Bend, Indiana

BRANCH HOUSES

MINNEAPOLIS
PEORIA
INDIANAPOLIS

KANSAS CITY
ST. LOUIS
COLUMBUS

TORONTO

bear more than our share of the pioneering expense. The same educational methods must be followed that we used in the early days of the motor truck."

N. L. Kuhnen, Huffman Brothers Motor Company, Elkhart, Indiana: "The farmer is harder to 'sell' than the average purchaser of trucks, and for this reason we have not worked hard in the farm field. It is unwise to offer to the present day farmer a truck too high in price. He is rapidly becoming convinced that quality is as necessary in trucks as in livestock, but up to the present each sale has demanded special concentration on the individual farmer's needs. We have to learn all about his work to convince him of the truck's value to him."

S. W. Winder, Indiana Truck Corporation, Marion, Indiana: "Our efforts to place our trucks with farmers have convinced us we get best results by following specialized lines of farming. We try to reach fruit farmers by showing successful instances where trucks have been used by fruit men. We do the same with livestock men. Farmers who can see where other men doing the same kind of work are pleased with our trucks are very likely to want trucks for themselves."

Major E. M. Lubeck, Diamond T Motor Car Company, Chicago, Illinois: "We have always favored the

farm field and believe in reaching the farmer direct by mail. We realize that maintaining service standards is the biggest factor in holding the farm trade. The field is just opening and the farm demand of the future should be constant."

Carroll E. Johnson, International Harvester Company, Chicago, Illinois: "The farm field is the greatest possibility for truck makers today, and the establishment of service stations is the biggest asset in reaching and holding this field. No one factor has succeeded with us as well as the inspection by our road engineers. We maintain sixty day inspection of every truck sold by our distributors and dealers and it enables us to advise the farmer as to the care of his truck and to learn of our truck's ability to do all grades of farm hauling."

G. D. Smith, Winther Motor Truck Company, Kenosha, Wisconsin: "The truck tours have done much to bring the farmers to a realization of the truck's value. Like any man, the farmer wants to see that the article is suited to his needs before he buys. He can do this best by seeing his prospective truck in action on the road."

These views, collected from different parts of the Middle West, show an optimistic attitude on the part of the men who make trucks. Our readers should find them of interest.

It must be remembered that there are at least three well-defined points of view, in anything like the motor truck business. The dealer and the purchaser meet more frequently than do the dealer and the manufacturer. This means the latter is apt to have a widely different point of view. He sees things with his interests first in mind, just as does the farmer who purchases the truck.

Gandy Branch in Chicago

An important development of the belting industry in the Middle West is the announced establishment of a Chicago branch by the Gandy Belting Company, of Baltimore, Maryland.

The new branch, which will be put into operation in the near future, is expected to carry one of the largest and most complete stocks of belting in the country. It will be situated at 549 Washington Street, corner of Clinton, in the heart of the machinery district.

In opening a branch at Chicago, the Gandy Belting Company expects, in addition to a prompt filling of its orders from that city, to increase the efficiency of service.

Fielder I. Schillenberg, Jr., who has been in charge at the New York office of the Gandy Belting Company, has been transferred to Chicago where he will act as manager of the new branch.

Farm Motors by Potter

Readers of The American Thresherman and Farm Power often ask us to recommend books treating the subject of steam engineering. There are not many good texts we can suggest as being of special interest to the operator of a steam traction engine. One book that we can speak of highly is Farm Motors, by A. A. Potter. Only a part of this book is devoted to steam engines, other subjects treated being gas engines, hydraulic and electric motors, traction engines, automobiles, animal motors and windmills.

Professor Potter is Dean of the engineering division of the Kansas State Agricultural College and is recognized as one of the keenest thinkers and most forceful writers on engineering subjects in the country. Farm Motors is published by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, and is now in the second edition.

Biggert an E-B Vice President

At a recent meeting of the directors of the Emerson-Brantingham Company, H. H. Biggert was made a vice president. Mr. Biggert's duties will cover the general supervision of the production of the eight E-B factories, continuing along the same lines of work that he has been supervising since joining the company last year.

Uncle Silas

ANOTHER man tried to go over Niagara in a barrel the other day. Friends are trying to gather up enough of the remains to hold a funeral sometime.

GOVERNOR COX has promised (if he is elected President) to appoint a farmer as Secretary of Agriculture. Governor Cox won't have to worry much over that appointment.

WHEN I was married I wore "fine boots" with red tops, size four and a half. Now I wear shoes and am glad to get them, size seven and a half, with rubber heels, and I wonder how I came to inherit such beastly corns and if they are hereditary. There are lots of fellow who wore fine boots when I wore them that ain't wearing anything now. The last uniform that their friends bought them was open in the back, and the slippers had paper soles. You know that the souls of our friends sometimes contract as the undertaker twists that little gimlet that slips us so noiselessly down into mother earth, where the flowers that cover us soon fade and the graveyard rabbits play bottle pool over us by moonshine. Man born of woman couldn't help it. He wasn't consulted about it and when he hands in his checks he doesn't know whether he's going to be a banquet for worms, be burned to ashes or have his frame wired and hung up in a doctor's office to grin at you when you come to take a look at it. A human skeleton in a doctor's office is a skinny looking devil that was hoisted from a dead level to a dead perpendicular by human jackals, but it gets its grin just the same.

IF traveling through this "vale of tears" we're apt to make many crooked paths and stumble and stagger along the highway of life like drunken sailors, calling others names and abusing them for less harmful acts than we commit ourselves every day. It's a sort of human selfishness that elings to us like grim death to a dying nigger, but it's not the way the Lord blazed the trail for us to travel over, not by a long jump.

When folks say mean things about us, half of which may be true, we go off the handle and hand them back one better and allow the overloaded gall bladder of bitterness to pour out its bile until it spoils the whole human system, and only a good physic will bring us back to normal. All because we forget that beautiful admonition, "Blessed are ye, when men shall revile you, and persecute you, and say all manner of evil against you falsely, for my sake. Rejoice and be exceeding glad: for great is your reward in heaven; for so persecuted they the prophets which were before you."

It would be a mighty fine exemplification of the true Christian spirit, when a man abuses you and swears at you and calls you hard names, to be able to just kneel down right where you are and ask God to forgive him, and then close up your mouth bottle tight and walk away. That's how Jesus preached and how He practiced all the way. But you and I, my human brother, have allowed the milk of human kindness to turn to clabber, when nothing but the whey shows up on the surface, with the curd lying at the bottom, soured and "N. G." It's under these conditions that the gauge shows a hundred and twenty pounds of steam pressure and the safety valve is corroded so that it won't give vent properly. But when it does "raise," we blow off the froth and filth and mud which has accumulated in the human boiler until a glue factory smells like the attar of roses compared with the atmosphere emanating from these conditions. It's under such human conditions as these that we should draw the fire and scrape the flues and clean the boiler, and force ourselves to pray: "Forgive us our trespasses as we forgive them that trespass against us."

Oh, I know the recipe by heart, fellows, even if I have such a poor way of exemplifying the fact. My plan has always been to fight first and forgive next, in my dealings with mankind, since the days of my youth, when I was beaten with many stripes, uncalled for and unearned, by overbearing, cruel men. "Damn nigger drivers," I used to call them, and registered a vow to heaven that some day I'd pay them off with a pint of blood for every drop they drew from my unprotected little body. I've paid some of the debt, too, but not in that way, but rather by heaping coals of fire upon their heads in good deeds. It's a mighty hard prescription to take, I know, and I gag at it yet, but it's the greatest blood purifier and soul healing balm that the Son of Man ever offered to the children of His creation. "As ye would that men should do unto you, do ye even so unto them," and do it first, is the true way to live in this world. It will prove the only safe way to die by, for then whatever the Giver of All Good may have laid up for us on "The other side of Jordan, in the sweet fields of Eden," will be enjoyed by us with better appetite than if we had "crabbed the party" and left the world without even groan from the undertaker.



Small Belts

Cling-Surface is just as good for small as big belts.

Here is a 4" fan belt at speed of 2020 ft. per minute, on 5 ft. centers, running slack.

If it slipped ever, even for a minute, you can guess where it would go, but it doesn't.

You can run every belt you have—thresher, separator, feed, saw or any other—easy slack with Cling-Surface, not all equally slack but none tight.

The best way to prove it is to try it.

Buy Cling-Surface in 1, 5 or 10 lb. tins from your dealer or from us. Ask us.

CLING-SURFACE CO.
1070 Niagara St. Buffalo, N. Y.



More Power for Thresher or Shredder

The Vacuum Non-Slip Pulley has had another very successful season among threshermen throughout the country.

Many threshermen have decided that since the Vacuum-Non-Slip Pulley works so well on even a heavily-loaded separator it will work fine on a corn shredder or alfalfa cutter, as is evidenced by the orders that are coming in now.

Write for further particulars and prices to

Vacuum Non-Slip Pulley Co.
1811 Arcade Building
St. Louis - Missouri



Clean straw for 10c per acre. Surely it is worth that much and 3 days at that price pays for the Link Hood.

It is the only hood that cleans straw, builds better stacks and saves the chaff.

It is worth while to get our hood circular. Write for it today.

OIL-RIGHT Lubricator—Guaranteed to save enough oil in a season to pay for itself. And it takes away the most dangerous job on your rig.

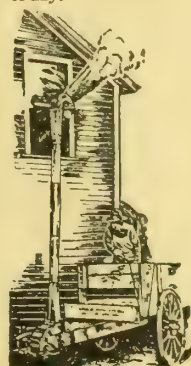
Thirty thousand satisfied users. It will please you.

Holds two gallons.

Costs only \$8.00.

Grain Saving Wind Stacker

Save Grain—We guarantee to save grain on your separator, any make or size, and clean a share of the dirt out of your straw or refund your money and you may keep the stacker. Write us about it today.



Liberty Grain Blower

Let your engine or automobile elevate your grain and clean it at the same time. It raises the test. Takes out all mould, rust and grass seed.

Costs only about 1/3 as much as the old style—is easier to move and takes less space. Send for particulars.

LINK MANUFACTURING CO. KANSAS CITY, MO.

South Dakota Threshermen

Join the South Dakota Brotherhood of Threshermen

and become a member of the fastest growing threshermen's organization in the West. Last year we increased our membership over 800% and are making a very good showing again this year.

The South Dakota Brotherhood of Threshermen offers you protection under the Labor Compensation Law of South Dakota and also the State Fire Bond Law. Anyone desiring fire insurance on any of their machinery can obtain it from us at cost of less than half the old line rates.

A policy in our Protective Association will protect you while threshing grain, shelling corn, hulling clover, shredding corn, cutting ensilage, baling hay, sawing wood, grading roads or highways and all tractor work, and will take care of any claims that any of your employes may present in case of accident, and all of the doctor's fees and hospital bills. All you will be asked to do is to report the claim to us immediately and it will be given prompt attention.

A policy in our Mutual Insurance Company will pay any loss by fire, which may occur while threshing for a neighbor, that may destroy any of his property, not to exceed the amount written in the policy, and any loss to your own machinery caused by fire, lightning or tornado, at all times of year, in the shed or out.

All our insurance is on the mutual basis and any money left on hand at the end of each fiscal year is either returned to the policy holder in cash or applied on next year's insurance.

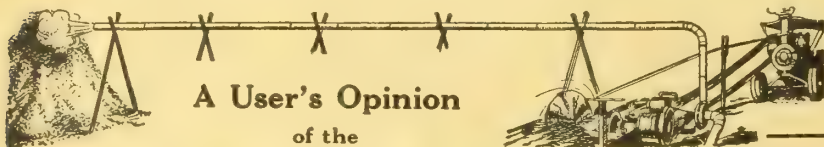
For further information write

SOUTH DAKOTA BROTHERHOOD OF THRESHERMEN

W. A. SWARK, Secretary

618 Security National Bank Building

SIOUX FALLS, S. D.



A User's Opinion
of the

CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower, as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs.

Yours for business,

C. S. LONG, New English, Iowa, R. D. No. 1, Box 40.

The letter explains itself. This man's blower has worked unfailingly for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO



How Many ?

Although the cost of printing and paper has advanced tremendously during the past year, or even months, we are still filling orders for Settlement Books at the old price, 25 cents. How many do you want?

The
AMERICAN THRESHERMAN
and FARM POWER

Meet Us at the Fairs

AUGUST is the month that issues in the Fair season. Fairs will be held continuously from the middle August, when the Missouri State Fair opens its gates at Sedalia, until November, when the Georgia State Fair at Macon closes the outdoor fair season.

North Dakota's State Fair at Grand Forks and its Inter-State Fair at Fargo are almost "sooners" among the big fairs. During July, both of these fairs enjoyed prosperous seasons.

Our genial field supervisor of Fair service, Mr. J. B. Parker, will be in personal charge of the work at the Eastern fairs. Beginning at Erie, Pennsylvania, on August 23, he will be busy as a Wisconsin beaver until the curtain is rung down on the autumn Fairs. Here are a list of the fairs where old friends will likely have a chance to renew acquaintance with Uncle Silas' right-hand man.

Erie, Pennsylvania, Exposition, August 26-28.

Williams' Grove, Pennsylvania, Picnic, August 30-September 4.

Rochester, New York, Exposition, September 6-11.

New York State Fair, Syracuse, September 13-19.

Allentown, Pennsylvania, Fair, September 20-25.

Trenton, New Jersey, Inter-State Fair, September 27-October 2.

York, Pennsylvania, Fair, October 5-8.

As you see, Mr. Parker will have some busy days during August, September and October. Along

with these fairs, he will find time to drop down to the big fair at Hagerstown, Maryland, right after the York Fair.

Mr. Bagenstos and other American Thresherman and Farm Power representatives will be found at the big state fairs of the middle West. Moving westward from Ohio to Kansas, you will find the following fairs at the times mentioned:

Ohio State Fair, Columbus, August 30-September 4.

Kentucky State Fair, Louisville, September 7-11.

Michigan State Fair, Detroit, September 1-6.

West Michigan Fair, Grand Rapids, September 20-25.

Indiana State Fair, Indianapolis, September 6-11.

Illinois State Fair, Springfield, August 20-28.

Wisconsin State Fair, Milwaukee, August 30-September 4.

Minnesota State Fair, Hamline, September 4-11.

Iowa State Fair, Des Moines, August 25-September 3.

Missouri State Fair, Sedalia, August 14-21.

Kansas Free Fair, Topeka, September 13-18.

Kansas State Fair, Hutchinson, September 18-24.

Nebraska State Fair, Lincoln, September 5-10.

South Dakota State Fair, Huron, September 13-18.

Every fair will be so good that the visitors can well feel it will be a privilege to attend; with fairs often conflicting in dates, our representatives will be busy making connections. But look for Uncle Silas' tent, whatever fair you attend.

Remember California in September

MANY tractor owners, dealers and makers have objected to the heat and discomfort of the big summer tractor shows. The Salina, Kansas, demonstration of two years ago was one to try the best of tempers.

Other tractor enthusiasts have felt that winter demonstrations do not give tractors their best opportunities to show what they can do.

Neither of these objections can be raised against the big California exhibition, to be held September 20 to 26. The weather furnished by Los Angeles in September is fit even for angels. The climate will seem heavenly to men who have spent a hot, perspiring summer in North Dakota or Texas.

The National Tractor & Implement show of the West will welcome its visitors in a lovely setting. The show will be held in a large sycamore grove. No tents or covering will be required. Electric current for motors will be supplied as well as decorations, signs, railing and fences. All this is included in the reservation fee.

A representative crowd is assured. Farmers and ranchmen motor everywhere. Manufacturers have realized this from the first, so that it is not surprising that over sixty-five thou-

sand feet of display space has already been reserved.

The number of prospective tractor buyers on the Coast will be swelled by many Eastern and Middle Western persons who are vacationing in California at this time.

The territory directly interested in the Los Angeles show is absorbing twenty per cent of the automotive products of the United States. This in itself is said to be the reason why such unusual interest has been aroused among manufacturers. They realize it is an exceptional opportunity to place a product before a responsive crowd of buyers and intensely interested prospects.

Ten thousand window posters are being mailed to all implement and automobile dealers of the West Coast States. More than one million advertising stickers are being sent out. Display advertising is appearing in all the trade publications as well as the general agricultural and fruit papers of the Pacific Coast.

The daily newspapers of the more important cities of California, Oregon and Washington are being used to acquaint the trade and the public generally with the importance of

the Los Angeles Show. The famous highways of California and adjacent states are being marked, because this is a great country for motor car transportation. More than \$25,000 additional money will be spent in intensive advertising.

The Los Angeles Show is fortunate in having secured as show manager, Guy H. Hall, who has staged five National Tractor Shows. His experience will be a help to all exhibitors.

Everything points toward history-making in the tractor world, when the gates to the big California grove are opened.

Don't forget the location. Don't forget the name. Keep in mind the dates—and you'll be glad you came.

Insure Against Dust

(Continued from page 9.)

an angle of about thirty degrees with the deck, prevents the cylinder from throwing into this intake any straw, grain, or other heavy material. This fan removes large quantities of dust, mainly through the rear intake. The equipment would no doubt be more effective if the front intake were eliminated, the rear intake enlarged and moved forward slightly, and the intake hood built along pyramidal lines, with no sharp, abrupt curves.

2. A three-fan installation, consisting of a double, built-in fan with a single shaft, located over the beater, and a single fan placed midway on the deck of a 23x36 inch separator (Fig. 2).—Each unit of the double fan has one inlet, while the single fan is provided with two inlets. Each fan has a diameter of eighteen inches and a peripheral width of six inches (outside dimensions). The speed of each fan is 1,000 revolutions per minute. The single fan is driven from the double fan shaft, which in turn is driven from the shaft of the first beater.

This equipment collects large quantities of dust. Doubtless equally as satisfactory results could be obtained in a more economical manner by removing the single fan and increasing the speed of the double fan to approximately 1,200 revolutions per minute. In the union of the three discharge pipes shown, the final or common discharge pipe should be enlarged so that its cross-sectional area would approximately equal the combined cross-sectional area of the original pipes. Otherwise the fans will not operate at their maximum efficiency.

3. A 28x44 inch separator equipped with a single-inlet fan with a diameter of twenty-six inches and a peripheral width of six inches (outside dimensions) (Figs. 3, 4, and 5).—The entire fan equipment is constructed of metal. The fan is driven from the cylinder shaft at a speed of 1,300 revolutions per minute.

The noteworthy features of this type of installation are (1) the large tapering intake over the first beater, (2) the rigid construction and attachment of the equipment, (3) the belt tightener for starting and stopping the fan, and (4) the movable joint at the end of the fan-discharge pipe.

4. A double-inlet metal fan with tapered intakes located over the beater on a 20x32 inch machine (Fig. 6).—This fan is run at a speed of 900 revolutions per minute and has a diameter of twenty-three inches and a peripheral width of eight inches (outside dimensions). This equipment shows good design and construction, but would be more effective if driven from either the cylinder or the beater shaft at a speed of about 1,200 revolutions per minute, with a driven pulley at least four inches in diameter.

A metal deflection plate beneath the two intakes, placed at an angle of approximately thirty degrees with the deck prevents clogging of the fan with straw, grain, and other heavy material.

5. A wooden, 22½x12 inch (outside dimensions of drum) fan installed over the second beater on a 36x60 inch separator (Figs. 7 and 8).—The fan is driven from the cylinder shaft at a speed of 1,300 revolutions per minute.

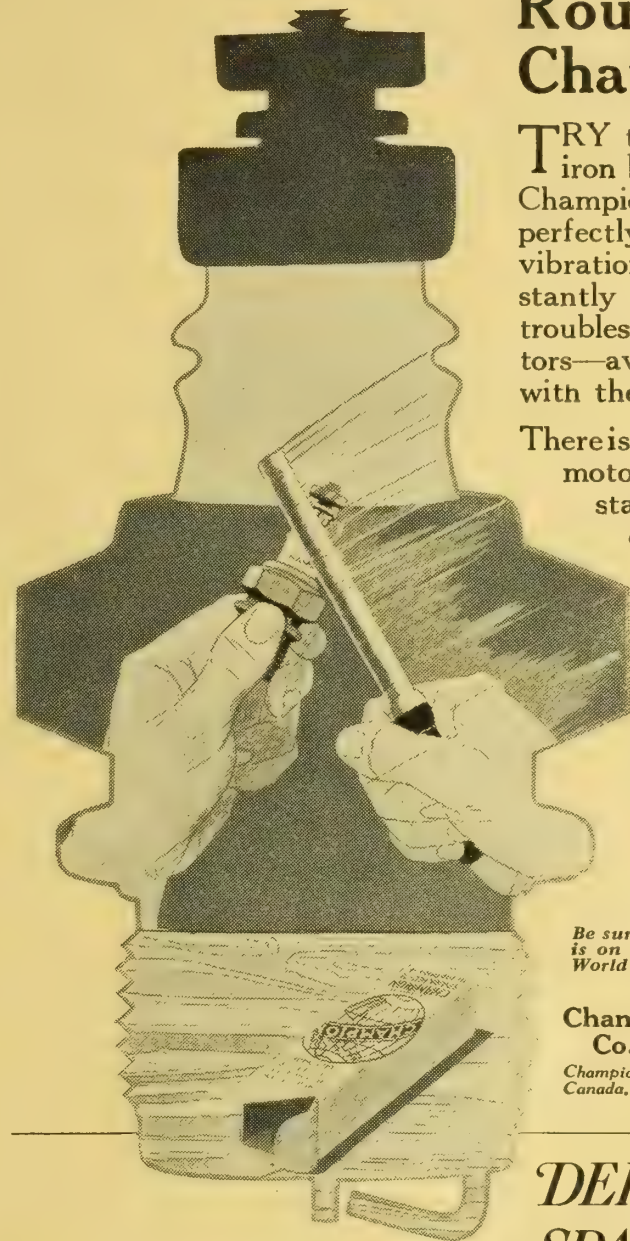
This former double-inlet, box-type fan was changed to a single-inlet type, the



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DEPENDABLE SPARK PLUGS

following alterations being made: The fan shaft was shortened, one intake and hood removed, and the fan was moved to the side of the deck. The remaining intake hood or box was tapered and the single inlet in the fan drum was enlarged. The speed of the fan was increased from 900 to 1,300 revolutions per minute. This simply constructed, light-running fan removes large quantities of dust. The straight metallic discharge pipe offers very little resistance to the passage of the dust-laden air.

Attention is called to the dual fire extinguishing system, consisting essentially of a chemical fire extinguisher on the deck and a steam hose line running to the steam engine. Each unit is connected to a piping system, by means of which the interior of the separator is sprayed in case of an explosion or fire.

6. A wooden, double-inlet, box-type fan, with a 22½x10 inch drum (exterior dimensions), placed over the beater on a 36x56 inch separator (Fig. 9).—This fan is driven from the beater shaft at a speed of 800 revolutions per minute.

Attention is directed to the idle pulley on the fan which serves to start and stop the fan. More satisfactory results could be obtained with this fan by running it at a speed of about 1,200 revolutions per minute. Wooden fans of this type are inexpensive and light running.

7. A remodeled box-type fan (Fig. 10).—The fan case was slightly raised and securely placed on a rigid base. The speed was increased to approximately 1,200 revolutions per minute.

The overhang of the fan shaft was remedied by supplying an additional bearing near the pulley, while the fan outlet was enlarged at the casing. The short section of the metallic discharge pipe was equipped with an adjustable forty-five degree elbow. These modifications greatly increased the efficiency of the fan.

This bulletin, just quoted, gives the threshermen the summary of Federal investigations in the Northwest.

It is unfortunate that no genius has as yet discovered a way to utilize this explosive power. What a splendid cheap substitute for kerosene!

One might infer that the Whiteman County country is a land to be avoided. It is far from that—it is one of the garden spots of America. The men who solve the fruit and

grain problems of that section would exchange it for no other.

The Nez Perce Indians had a saying, "Whoever drinks from the Clearwater River will come back to our country again." Most of the men who have told frankly of the grain explosions in this electric, peppery section of our country have tasted of the Clearwater. They expect to do and die in the Palouse country.

The Literary Editor—"That young fellow Scribbler sent in a paper this morning entitled, 'Why do I Live?'"

The Editor—"What did you do with it?"

The Literary Editor—"Returned it with an inclosed slip saying, 'Because you mailed this instead of bringing it personally!'"—Houston Post.

From Farm Boy to World Figure

A little Iowa farm boy, an orphan, without wealth or influential friends, grew up to have his name spoken with respect the world over. To all people he is known as the saviour of Belgium, the food administrator of America, and the director general of relief in Europe. Is this not a typically American achievement?

Vernon Kellogg in his book, "Herbert Hoover, the Man and His Work," which is published by D. Appleton & Company, New York, and sells for \$2.00, gives us a thoroughly human story. Your heart goes out to the little orphan farm boy who, with only ordinary advantages, faces the world with his chin up. You feel a pride in the achievements of the man because of the road he climbs to gain them. You are proud of this country of ours where it is possible for so many boys to raise themselves from humble beginning to positions of importance in our national life and in the world. No true American can read this book without feeling its inspiration.

New Electrical Text

Any man who expects to understand gasoline engines must be equipped with a thorough knowledge of electrical terms. Many of the troubles of the engine operator arise from his incomplete knowledge of electricity.

Few texts on electrical subjects can be used as simply as a dictionary. One of these, however, is the Standard Electrical Dictionary, written by Prof. T. O'Connor Sloane, and published by the Norman W. Henley Publishing Company of New York City.

This text is more than a dictionary. It is really a compact encyclopedia, giving concise descriptions and explanations of all electrical terms and instruments. For instance, under the subject "Batteries," each battery known to the scientific or commercial trade is treated separately. Many individual batteries are explained by illustrations.

This same thoroughness is shown throughout the text. The second part of the book is really an appended encyclopedia written by Prof. A. E. Watson of Brown University. This addition includes all modern terms in the electrical world.

It is doubtful if a mechanic can secure anywhere for the price of this book, five dollars, a similar amount of electrical information. Over six thousand definitions are furnished by the text; its possession insures its owner against loss of time in understanding electrical terms.

One man will wear a machine completely out, while another will make his machine of the same kind last a number of years longer, and all the difference will lie in lubrication and other little details.



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31x4	11.00	3.25	36x4 1/2	16.50	4.50
32x4	12.00	3.50	35x5	17.00	4.75
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this dry, hot season. Most fires are caused by flying sparks. Don't risk seeing your savings of years go up in smoke.

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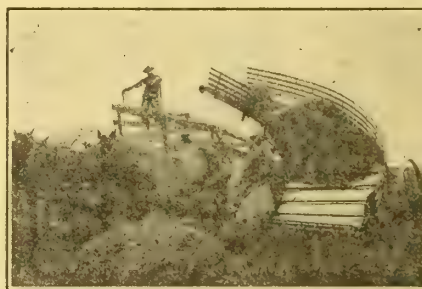
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Has a continuous Lift which prevents the shocks from being jarred or dropped down on a cross carrier, thereby preventing the grain from being shelled out. It is light weight, weighing less than a ton. Four horses handle it same as a binder. Easy running, and no small working parts.

It loads a load of shocks in 3 to 5 minutes and does away with half of the bundle teams and wagons, besides it does the biggest half of the hardest part of the work and does that better, cleaner and quicker than a man does it with a fork by hand.

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For Sale and Want Department

In these columns any person may advertise for sale or trade anything which he desires to sell, purchase or exchange.

ANNOUNCING A NEW CLASSIFIED ADVERTISING RATE

Commencing with the September, 1920, number, the rate on Classified Ads will be twelve cents a word:

During the past few months the problems of the publisher have multiplied at an alarming rate. Expenses have increased by leaps and bounds. Paper, the raw material of the publishing industry, has increased in cost until today it is almost four times as high as it was in 1914, and with still higher prices in view. Printing, the big labor item in the publishing business, art work, engravings, editorial contributions, office expenses and salaries, in short, everything that enters into the production of this magazine has very greatly increased in cost the past few months and with no assurance of a more stable condition in the immediate future.

POSITION WANTED.

POSITION WANTED—Running a threshing rig, truck or working in a garage; four years' experience running a gas engine. Gust Kasten, Box 247, Richardton, N. Dak.

HELP WANTED.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

SALESMEN WANTED—Lubricating oil, grease, paint, specialties. Samples free. Whole or part time. Commission basis. Men with car or rig. Write for the attractive terms. Riverside Refining Co., Cleveland, Ohio.

FOR SALE.

FOR SALE—Modern cider mill, complete, price \$300. Cool Bros., Helmer, Ind.

FOR SALE—Advance twelve-roll husker. Bargain. F. L. Denise, Sidney, Ohio.

FOR SALE—One Big Four 30-60, nearly new. Wiggert Bros., Buffalo Lake, Minn.

FOR SALE—Ohio Hay press, good shape, \$300. Jos. Brockson, R. 1, Waukegan, Ill.

FOR SALE—One Big 16 Rosenthal ensilage cutter, nearly new. H. O. Downend, R. 1, Plymouth, Ohio.

FOR SALE—12-25 Avery tractor, excellent condition. A bargain. Larson Bros., Roslyn, S. D.

FOR SALE—Rumely huller with belts; new Plano shredder. E. A. Henery, Camargo, Ill.

FOR SALE—Birdsell clover huller. First \$300 takes it. O. V. Dunsieith, Sabina, Ohio.

FOR SALE—Sawyer 150-foot, eight-inch, four-ply canvas belt, never used, \$100. Wm. Kauffman, Perry, Ia.

FOR SALE—Marsh steam pump, B-B size, used only six days. \$15. Geo. Wangsvick, Mott, N. Dak.

FOR SALE at a Sacrifice—10-20 Titan with P & O plows. John Pfister, Grover Hill, Ohio.

FOR SALE—One 17x22 Peerless hay press, all in A-1 condition. Morris E. Blanch, Aurora, Ohio.

FOR SALE—40-inch Improved Heineke self feeder, used two seasons; in fine shape. Box 465, Bloomington, Ill.

FOR SALE—John Deere eight-bottom engine plow, good as new. Price \$300. J. H. Myers, Oakland, Ia.

FOR SALE—33x56 Advance Rumely separator, run two years, first-class condition. Box 308, lasher, N. D.

FOR SALE OR TRADE—16 Advance, 16 Rumely, 25 Rumely, 18 Gaar-Scott. Wm. Vandre, Mendota, Ill.

FOR SALE—Two-inch charcoal iron boiler tubes at one half the prevailing prices. Box 465, Bloomington Ill.

FOR SALE—16-H. P. return flue steam engine No. 3245 for \$200. Wm. Fettes, Sibley, Ia.

FOR SALE—One 32-inch steel Garden City feeder, good as new. John Skinner, Gowen, Mich.

FOR SALE—Four Cushman engines at last year's prices. E. D. Richardson, Cawker City, Kans.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—One Russell and one Case threshing outfit, complete, and clover huller. Henry Reesman, Burlington, Wis.

FOR SALE—One Heider tractor with automatic lift, three-bottom plow, in A-1 condition. J. H. Klesath, Dana, Ill.

FOR SALE—One pair Carpenter wings, used two seasons. One Advance separator, 40x60. J. J. Raway, Hastings, Minn.

FOR SALE—Hydraulic cider press, eighty-barrel capacity, almost new. Apple crop failure here; will sell at bargain. O. M. Darbyshire, Sabina, Ohio.

FOR SALE—One Advance 18-H. P. compound engine. Priced for quick sale. \$300. Address P. C. Ranney, Elkhorn, Wis.

FOR SALE—20-40 Rumely OilPull, never been used; or might use good Reeves steamer. P. E. Shelden, Thompson, Mo.

FOR SALE—Reeves 33x56 separator; new Rumely Special huller; Reeves engine, 20-H. P. double. Quitting the business. Chas. Roark, Danville, Ind.

FOR SALE—8-16 Mogul, overhauled, with three-bottom Oliver plow. Reason for selling, too small. Will take good Ford. Stewart Bros., Racine, Minn.

FOR SALE—Star water well drilling machine and tools, good shape. Bargain if sold at once. Bert C. Kinnaman, Noblesville, Ind.

FOR SALE—12-25 Avery as good as new, bought in 1919. Have sold farm, reason for selling. J. Marner, Hampton, Minn.

FOR SALE—One Twin City 40-65, A-1 condition. New block, new piston, new gears. Will sell cheap. Lock Box 4, Gilbertville, Ia.

FOR SALE—16-H. P. Advance Rumely steam engine, used one year; excellent condition. Have no use for it. A bargain. Archie Chamberlain, Burbank, S. D.

FOR SALE—Sawmill, steel frame, new dust blower and belt in good condition. Also clover huller and threshing outfit. Burt Millard, Murrayville, Ill.

FOR SALE—Steam engines, separators, gas tractors, tubes, expanders, pumps, belts, tire protectors, farm land. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—One No. 1. Birdsell huller and 500-foot silo filler pipe, 480-foot distributor pipe. Good secondhand threshing rig. F. E. Peterson, Kewanee, Ill.

FOR SALE OR TRADE—One Russell engine, 25-H. P., one Advance engine 22-H. P. two Avery separators, 42x62; One Huber separator, 36x60. Art Rohwer, Owatonna, Minn.

FOR SALE—Southwest Universal bean thresher with self feeder, in good running order. Wm. F. Martin, R. 1, Box 8, Genoa, Colo.

FOR SALE OR TRADE—Steam threshing and plowing outfit, in good shape. Will sell or trade for 20-40 Case tractor. Robt. Butler, Mandan, N. Dak.

FOR SALE—Case eight-bottom tractor plow, in A-1 condition; or will trade for small tractor. F. C. Ehlers, Cleghorn, Iowa.

FOR SALE—25-H. P. Buffalo Pitts traction engine, in first-class condition. \$750. M. Talcott, Georgetown, Penn.

FOR SALE—Two Aultman & Taylor beaners with self feeders and carriers; practically new. P. J. Peters, 743 Bond Ave., Grand Rapids, Mich.

FOR SALE—One pair of extension rims for Case engine, size 8"x5". Also Carpenter wing feeder for Case 36" separator. G. M. Johnson, Radcliffe, Iowa.

FOR SALE—16-H. P. Advance steam engine. This engine is in good condition and the price is right. H. J. Ellis, Brooklyn, Wis.

FOR SALE—Five-plow Avery outfit, complete and in very good condition. Plow, \$300; tractor, \$1,000. E. R. Vehrs, Nekoosa, Wis.

FOR SALE—Large stock of rebuilt steam engines, separators, and tractors. We have what you want. J. O. Frish & Co., Fond du Lac, Wis.

FOR SALE—One two-cylinder 15x30 Huber engine. Cheap if taken soon. In first-class shape. W. L. Vought, R. 1, Bingham Lake, Minn.

FOR SALE—One new Avery 8-16 tractor; one new motor boat reverse gear; one two-cylinder motor. A. M. Laupp, Centaur Station, Mo.

FOR SALE—20-H. P. Avery under-mounted, new flues, new gears; Avery 36x60 rebuilt, new belts, new weigher, new tank on wagon. Address C. H. Twiss, Tower Hill, Ill.

FOR SALE—One 15-25 Lauson tractor, like new; one ten-foot tandem P & O disc; one three-bottom fourteen-inch P & O plow; will sell cheap. Geo. Walters, R. 1, Ashton, Ill.

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FOR SALE—Feed and flour roller mills; 25-H. P. electric motor; doing good business; building and living rooms included in price of \$4000. One-half cash. John Prosser, Turtle Lake, Wis.

FOR SALE—One 22-H. P. return flue Minneapolis; one 8-16 Avery tractor, two years old; one 12-H. P. Case; one eight-roll McCormick. Can use a good Birdsell huller. Wm. Seyb, Donnelson, Ia.

FOR SALE—One 16-H. P. Rumely engine, Canadian type boiler, four years old, in A-1 condition; on 30x50 Buffalo Pitts Niagara steel separator, complete and in A-1 condition. Lindberg & Spry, Essex, Ia.

FOR SALE OR TRADE—160 acre farm, good soil, no stone, lays fine. Price \$35 per acre. Could use a good threshing rig as part payment. Harley Coffland, Backus, Minn.

FOR SALE—Advance engine, 20-H. P., Baker valve, Nichols & Shepard 36x56 separator, feeder, wind stacker, drive belt, new tank. All in first-class condition. Must sell. C. J. O'Neill, Manteno, Ill.

FOR SALE—One 16-H. P. Buffalo Pitts steam engine, in good condition, also one 12-H. P. Peerless. One boiler and boiler front and grates, 36-inch by ten-foot. Newly refueled. Leon Vandervort, Tomah, Wis.

FOR SALE—40x62 Case separator in excellent condition; new stacker and feeder. Can deliver by August 20. Can be seen in operation any day up to that time. Chas. Wycoff, Wyoming, Ill.

FOR SALE—24-inch Belle City separator fully equipped with self feeder and wind stacker. 20-H. P. portable Milwaukee Lauson engine, in excellent condition. R. A. Lueder, Plymouth, Wis.

FOR SALE OR TRADE—For donkey engine. 20-H. P. Case engine, eleven years old; 36x58 Steel separator, seven years old. This machine is in good condition. J. L. Buckmaster, Hillman, Minn.

FOR SALE OR TRADE—Either 18- or 22-H. P. return flue Minneapolis steam engine, fully equipped and in first-class shape. Price very low. Frank Vsetecka, R. 3, Ft. Atkinson, Ia.

FOR SALE—One 14-28 four-cylinder Avery tractor with three-bottom plow. Price \$1600. This tractor has plowed seventy acres and no belt work. Fiedler Bros. & Co., Thomasboro, Ill.

FOR SALE—Birdsell clover huller No. 1, with self feeder and blower. Good condition. Write for further information. Jacob Raab, R. H2-270, Indianapolis, Ind.

FOR SALE—Four ten-ton flexible cross reach engine wagons; can be equipped for grain, gravel and tile; in good condition. Can be seen at Lake Park, Ia. Owner, Emmons Cannon, Ventura, Ia.

FOR SALE—Avery 5-14 self-lift plow, \$250; one furrow wheel for Avery tractor, \$15; one 54-inch Case geared wind stacker, \$75. Arthur Rissman, Enterprise, Kans.

FOR SALE—Two Aultman-Taylor tractors (25-50 and 30-60). Clover huller No. 5. Baker and Rumely separators. Sandwich No. 7 sheller. Reasonable price. John Harding, Gaines, Mich.

FOR SALE—Minneapolis 20-H. P. straight flue engine with heavy plow gears. In good running order. For further information write R. M. Frank, Belle Plaine, Minn.

FOR SALE—One 20-35 Flour City tractor, also one four-bottom P&O plow, 1919 outfit. Will sell separately. Address Ed Olson, Box 33, Brewster, Minn.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—Hart-Parr 20-40 tractor, \$1200; ten-disc Emerson plow, \$275. Both in good running condition. Ship f. o. b. Lawrence. O. G. Markley, Lawrence, Kans.

FOR SALE—20-H. P. double Frick, in first-class shape, \$1350. Birdsell Big Six huller with new feeder. Russell separator, 36x60, and steel tank. Joliet Big Four sheller. Dan S. Zehr, Mackinaw, Ill.

FOR SALE OR TRADE—Threshing outfit, Huber contractor engine, Case steel separator 36x58 with clover attachment and recleaner, corn shredder, McCormick six-roll Improved. Will take \$2500 cash for all of it. Wm. G. Meyer, R. 2, Elgin, Minn.

FOR SALE—One Frick sawmill No. 5419, right-hand; drive belt 50-foot, ten-inch, six-ply; 40-inch solid saw. Price \$400 spot cash. One Nichols & Shepard separator, hand feed, drag stacker. Price \$250. Mrs. Martha Tripp, Zaleski, O.

FOR SALE—8-16-H. P. Avery tractor; J. I. Case three-bottom self lifting plow. Outfit plowed less than forty acres. Price \$800. One six-inch well drill and tools. Price \$100. A good 80—\$50 per acre. Norman Engebretson, Eagle Bend, Minn.

FOR SALE—One Gaar-Scott 18-H. P. steam engine, one Gaar-Scott separator with wind stacker, feeder and weigher, one wagon, one water tank, 150-foot thresher belt. Price \$750 if taken at once. Address K. F., care The American Thresherman and Farm Power.

FOR SALE—Case 15-27 tractor, late model, with three-bottom Grand Detour plow, used six hours. Guaranteed good as new. Also Titan 10-20, excellent condition. John Deere three-bottom plow. W. E. Morris, Pontiac, Ill.

FOR SALE OR TRADE FOR SMALLER machine—One 70-H. P. Nichols & Shepard double engine and 36x60 Avery separator; good running order. Want about 50-H. P. engine, 32x54 separator. Oliver Mearns, Bostwick, Nebr.

FOR SALE—One Waterloo Boy tractor, \$250; one Parrett tractor, used very little, \$700; one twenty-inch Racine separator, nearly new, \$600. Indiana Parrett Tractor Co., 46 Kentucky Ave., Indianapolis, Ind.

FOR SALE DIRT CHEAP—20-H. P. Gaar-Scott engine; 40-inch Gaar-Scott separator, complete with all attachments; also 150x8x5 belt, steel pressed tank, pump and hose. Rig out two years. Write A. J. Schirck, Carroll, Ia.

FOR SALE—20-H. P. Minneapolis engine; 36x56 Minneapolis separator with blower, weigher, tank, wagon, belt. Complete threshing outfit in running order. Reason for selling, owner died. Mrs. Fred Wolfe, Rush City, Minn.

FOR SALE—Eight-bottom fourteen-inch Grand Detour plow with two sets of shares; used only three years. \$25 for quick sale. Droll & Finck, Advance-Rumely Agents, 219 E. 4th St., Davenport, Ia.

FOR SALE—Wood Bros., outfit, 25-H. P. engine; been out four years. 36x56 separator, run eighteen days; drive belt, Avery tank, all complete. A-1 condition. \$3000 cash. Reasons for selling. E. Shroyer, Lacey, Ia.

FOR SALE—12-roll Advance husker, three years old; always sheltered; excellent condition. Price \$345 f. o. b. Oak Harbor, Ohio. Will guarantee or pay one-half your expenses to look at it. The Arbuckle-Ryan Co., Toledo, Ohio.

FOR SALE—Aultman Star engine and American separator repairs from original patterns. Orders promptly filled. Send for new repair price list. Engine & Machinery Company, Marion Ave., and Navarre Rd., S. W. Canton, Ohio.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR RENT—640 acres splendid grazing lands, well watered and well fenced. Will pasture three hundred head of cattle. Will furnish this pasture six months, salt the cattle and look after them for \$3,600. B. B. Clark, Madison, Wis.

FOR SALE—40-80 Avery tractor; 36x60 Avery separator, complete run one season; 18-H. P. Avery undermounted steamer; 32x54 Avery separator; 10-20 Titan tractor and three-bottom Janesville plow. J. B. Clardy, Greenfield, Ill.

FOR SALE—Thirteen-inch Silage King silo filler, in good running order. Complete with fifty-foot pipe and deflector. Price \$110. Also a new Russell wheel scraper, four-horse road plow, four heavy slip scrapers. Priced right. H. O. Tiffany, Nelson, Wis.

FOR SALE—One 40-80 Avery tractor, rebuilt by factory man—new style—as good as new. Must be sold. Will guarantee. Write or wire at once. Also a 12-25 Avery and plow, in good shape. The McGavren Tractor Co., Missouri Valley, Ia.

FOR SALE—Complete threshing outfit. Having moved to Canada will sell my rig in western Minnesota cheap. 30-H. P. Advance steam engine, run six falls; 36x56 Minneapolis separator, equipped with Garden City wing feeder, run six falls. J. C. Eckstein, Bromhead, Sask., Can.

FOR SALE—One 30-60 rebuilt International Mogul kerosene tractor. Kept in good shape and in excellent working condition. Extension rims, six-bottom Oliver plows. Price \$1200. Also one 16-H. P. Stover portable gas engine, first-class shape. Price \$250. Arcady Farm, Lake Forest, Ill.

FOR SALE—One complete Nichols & Shepard rig, 25-85 engine and 36x56 separator, with Garden City feeder and wings. Rig has run three falls and is as good as new. Shredded and in the best of running order. \$3500 takes it at quick sale. Write or see, Lawrence Wilmerding, St. Joseph, Minn.

FOR SALE—One 12-20 E. B. tractor. Overhauled and equipped with new type manifold. Excellent condition. Price \$850. One 9-18 Case, rebuilt, good as new, only \$800. One three-bottom E. B. tractor plow in good condition. One Overland Model 83. E. E. Freeman, Fithian, Ill.

FOR SALE—New Cleveland tractor and plows, a bargain if taken at once. Brand new 15-H. P. Olds stationary engine on trucks. Terms to suit buyer on two above engines. New 10-18 (15-27) Case tractor. Will sacrifice if taken at once. 15-30 Rumely, \$500. Good shape. Needs few repairs. M. E. Woolcott, Watervliet, Mich.

FOR SALE—Complete Minneapolis threshing outfit consisting of 18-H. P. double cylinder engine, 36x56 separator, 150-foot, four-ply, eight-inch Sawyer belt, which has been used only one season. Outfit is in good shape and ready to go to work. Has been run eight falls and always been shedded. Will sacrifice at \$1500. S. E. Zink, Green Mountain, Ia.

FOR SALE—Complete threshing rig, nearly new, first-class shape, ready to run. 75-H. P. Case engine with fuel bunkers, water tank, pump, hose, \$125 drive belt, one steel Wood Bros. 40x62 separator with wings and blower. Run eighty days, looks like new. Price \$2,000. A. H. Mienkel, 1028 Ninth Ave., S. E., Rochester, Minn.

FOR SALE—Twenty-five hundred feet of lightning rods, including three dozen each long and short tops, four dozen glass balls, eight weather-vanes, and other supplies for complete rodding outfits, round and ribbon copper cables. Will sell at cost in parts or complete outfits. Send measurements and advise what you need. Maurice A. Park, 1114 East Johnson St., Madison, Wis.

FOR SALE—One 18-H. P. double cylinder Coleman. One 22-H. P. single cylinder Gaar-Scott. One 18-H. P. return flue Gaar-Scott. One 16-H. P. single cylinder Gaar-Scott. One 16-H. P. single cylinder Advance. One 18-H. P. return flue Minneapolis. One 30-60 International gas tractor. These engines are all rebuilt and in fine working order and will be sold cheap to close the business. Donner & Risser, El Paso, Ill.

FOR SALE—One No. 1 Birdsell huller; one 33x52 Gaar-Scott; one 32x56 Minneapolis separator, fully equipped; one 20-H. P. double cylinder Rumely; one 18-H. P. rebuilt double cylinder Gaar-Scott; one 16-H. P. Huber engine; one eight-roll Advance; one eight-roll Appleton; two six-roll McCormick huskers; one No. 105 Robinson Money Maker silo filler, complete for forty-foot silo; Rosenthal new corn huskers and silo fillers; Minneapolis engines, tractors and separators in stock. The Dafler-Moser Co., Richmond, Ind.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5,000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5,000 or more cash, balance as long as desired, six per cent interest. The pasture alone with the timber on the tract would pay for it, in a few years. B. B. Clarke (Old Sile), Madison, Wis.

FOR SALE—One Hart-Parr 40 B. H. P. tractor, \$800. One Hart-Parr 40-60 tractor, \$1500. One Hart-Parr 35-H. P., \$1000. One Fairbanks-Morse 15-25 tractor, \$750. One Little Giant 16-22, \$900. One Avery 12-25, \$750. One Heider 12-20, \$600. One Heider 10-20, \$600. One two-ton Jeffery Quad truck, \$800. One two-ton Reo truck \$800. One Oliver three-bottom self lift tractor plow, \$125. One eighteen-inch Appleton silo filler, \$125. One mounted two-hole Keystone corn sheller, \$100. J. P. Hansen, St. Ansgar, Ia.

NEW SELF FEEDERS AND WEIGHERS—At special reduced prices to clean out surplus stock. Are complete with attachments to fit Pitts steel frame Niagara No. 2 separators but can also be fitted to any other make. For sale by Wagner-Langemo Co., 418 First St., North, Minneapolis, Minn.

FOR SALE—Grading outfit, 40-65-H. P. Twin City kerosene tractor with twelve-inch extension rims. Two twelve-foot Adams heavy duty graders, three extra shares, 450 gallon fuel tank and wagon. Cook shack, cables, chains. A complete outfit in first-class condition, at a reasonable price. This outfit can be seen working any time. Henry Dubberke, Hubbard, Iowa.

FOR SALE—One 150-foot, nine-inch, five-ply Sawyer stitched drive belt, used ten days, A-1 condition, \$135. One fifteen-barrel steel tank, complete with Myers cog gear and twenty feet of new covered hose, \$140. Also one new two-inch rotary tank pump. Will furnish in place Myers cog gear pump for \$20 extra. This completes my threshing outfit and will send these goods to responsible party subject to examination. Clyde Shultz, Union City, Ind.

FOR SALE—Threshing and baling outfit. One 12-36 Case steam tractor, in A-1 shape, ready to go in the field; run six seasons. One E-Peerless 24x38 New Garden City feeder and common stacker, in good shape. One 17x22 Case power press; has baled only one hundred tons. The above machinery is all in excellent condition ready to go right into the field. Price \$1650. Frank S. Walton, R. 1, Huntingdon Valley, Montgomery Co., Penn.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8,500, half cash, balance long time. Object for selling have larger tract which desire to improve. S. M. Hashbarger, care Clarke Publishing Company, Madison, Wis.

FOR SALE
3-Bottom 14" automatic lift engine gang plows.....\$186.00
2-Bottom 14" automatic lift engine gang plows.....\$146.00
These plows are strictly new, fresh stock of latest model and are complete with rolling coulters, jointers and engine hitch and are the oldest and best known plow on the market.

We have the plows in stock and can ship the day we receive the order.
DORING SALES CO.,
623 E. Wilson St., Madison, Wis.

FOR SALE—One Avery 25-50 kerosene tractor, good as new; threshed about 25,000 bushels and plowed about 100 acres. Same equipped with self guide. Have new magneto and some other extra parts for same. Price \$1750. One Huber 32x54 thresher and drive belt; been run several seasons, is in good running shape and does fine work and will do satisfactory work for years. Price \$250. One fourteen-inch P&O four-bottom Independent beam Mogul automatic lift steel plow, with four subsoiler attachments and lot extra shares for same. Scotch Clipper bottoms. Price \$250. All this machinery has been carefully cared for and housed when not in use. Has been satisfactory but having no further need of it, it is for sale. W. Frank Jarrell, Chestertown, Maryland.

THRESHING RIG FOR SALE—One complete threshing rig for sale in first-class running condition, consisting of one 40-80-H. P. Imperial gas tractor, four-cylinder equipped with gas headlights for for late threshing and moving, and with a steamboat whistle and a 500-gallon oil tank with wagon. One 36x60 Avery separator, complete with folding wings, self feeder, swinging conveyor and bagger. This rig has been run only three seasons by expert only and well taken care of. Also have an eight-bottom engine plow with both stubble and breaker bottoms with extra shares for both sets. Will sell at a bargain if taken soon. Call or write me for particulars and arrangements to see the rig in operation, in order to realize the value offered. C. J. Newhouse, Alexandria, Minn.

MISCELLANEOUS.

WANTED—Little Devil crank shaft. John Loh, West Bend, Ia.

WANTED—Crank shaft for Pioneer 30. George L. Hess, Sentinel Butte, N. Dak.

TO SELL machinery or other property, write C. C. Shepard, Minneapolis.

SEND FOR LIST of rebuilt saw mills and power. Roberts Machine Co., East Palestine, Ohio.

WANTED—Small sawmill outfit complete; state price and condition. A. Watson, Holcombe, Wis.

OPPORTUNITIES—Arizona, California, Sonora—Particulars, Rogers-Burke Service, Tucson, Arizona.

WANTED—Reeves 25 or 20-H. P. cross compound engine. State age and price. Box 96, Morse Bluff, Nebr.

\$800 BUYS MY AULTMANN-TAYLOR No. 4 huller, like new. Used thirty-five days. Blower, feeder, and recleaner. Mely Komrs, Gilead, Nebraska.

WANTED—To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

BELTS COST MONEY—Have your canvas threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

FEED MILLS—\$20 for an all-steel eight-inch burr mill. Other sizes not available. These are real bargains. Harris Machinery Company, Minneapolis, Minn.

AM WRECKING 36x60 Advance separator. Castings at bargain prices. Two Marsh steam pumps. 100 bolts, ¾x3, 200 bolts, ½x2. W. G. Phelps, Buffalo, Mont.

HAVING FINISHED my Southern Kansas run will sell nearly new 65-H. P. Case steam engine. Would ship it north if you had good run, or trade for good land. Roy Anderson, R. 4, Parsons, Kans.

CASE STEAM TRACTOR 9x10—This outfit is in fine working order. Want to make a quick sale. Price \$850. Boiler and engines tested. Harris Machinery Co., Minneapolis, Minn.

ANVILS—Brand new all steel, 70 to 75 lbs., government surplus, all U. S. inspected and guaranteed. Highest grade. Bargain price \$14.50. Harris Machinery Co., Minneapolis, Minn.

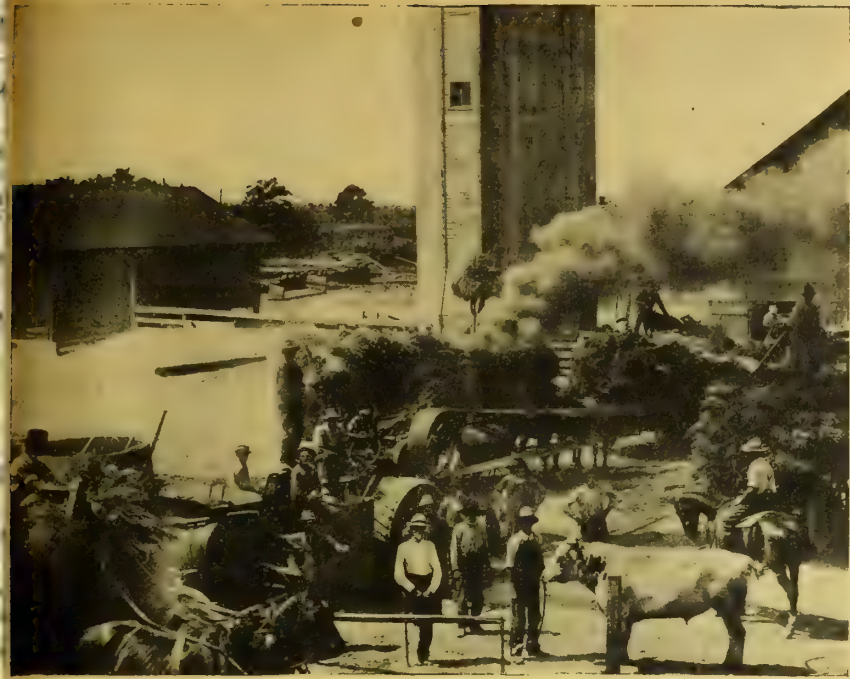
WE SPLICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebore cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

BOILER TUBES—BOILER TUBES—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

ENDLESS CANVAS BELTS four-ply six-inch, 100-foot, \$57; 125-foot, \$70; 7-inch, 100-foot, \$65; 125-foot, \$80. 150-foot, \$96; five-ply, seven-inch, 125-foot, \$100; 150-foot, \$120. These are not the light goods offered by some, but are full 32-ounce and fully guaranteed by reputable manufacturers. Cash with order. A. H. Matteson Co., Cambridge Springs, Pa.

CLEANUP SALE—Guaranteed endless thresher belts, cash with order while they last. Canvas Belts. Four 125-foot, seven-inch, four-ply, \$71 each. Ten 150-foot, eight-inch, four-ply, \$94 each. Three 150-foot, eight-inch, five-ply, \$120 each. Endless Griptite Rubber Belt. Four 100-foot, seven-inch, four-ply, \$75. Fifteen lengths twenty-foot, two-inch canvas jacketed suction hose, \$18. Address Economy Supply Co., 229 S. Water St., Peoria, Ill.



The Steam Tractor Is Neither Obsolete Nor Past Its Days of Usefulness.

Steam Tractor Has Its Place

BY GEORGE A. DECHANT

MANUFACTURERS of power farming machinery for the past few years have been devoting the major portion of their time to the development of gasoline or kerosene tractors. Many new companies have entered the farm power field, identifying themselves with the internal-combustion type of tractor. Research and educational departments, both of private enterprises and the Agricultural Bureau of our national government, have been directing their efforts toward developing useful, practical machines of this type.

The steam tractor is neither obsolete nor past its days of usefulness. When we think of the importance of the position held by the steam engine industry in the past; of the high degree of perfection of product reached through years of conscientious effort on the part of the pioneers in this business; many purchasers, whether they be farmers, threshermen or road-building contractors, are going to prefer the old dependable steam tractor they are so familiar with to the comparatively new-born gas tractor. How many of you, as you read this, feel that warmth of admiration rising as pictures return to your minds of a late fall morning, the sun just lighting up the east,—a substantial looking steam engine giving out a friendly warmth, the engineer smiling with satisfaction as he slowly gets up motion in the threshing and whistles for the waiting pike pitchers to commence feeding. The morning is chilly, but soon, under the steady, even power of the steam engine, the thresher is demanding brisk action on the part of the whole crew if they are to supply its demand for grain, and take care of the stream of cleaned seed pouring into the wagons or bags.

Perhaps you are a road-building contractor and you picture the

steady progress up a difficult grade of one of the old reliable "steamers" pulling its train of wagons loaded with material kept hot by the steam from the boiler piped to each wagon box. No faltering there because of lack of weight or power; but with a little louder exhaust of seeming defiance the steam tractor performs its duty and wins the crest of the hill.

Possibly you are a thresherman who each winter has many calls to furnish power for sawmills, corn shellers, rock crushing outfits, and other off season jobs. Your steam engine is a constant producer, regardless of season. It negotiates the steep grades, pulling its heavy equipment behind it. In many territories water and coal are accessible and when operating the sawmill you have a constant supply of slabs and waste, doing away with the purchase of fuel.

Do you think that the pioneer manufacturers of power machinery are going to lightly toss aside the fruits of many years of experimenting and struggle which have made possible the highly developed steam tractor of today? They are well aware of the great number of practical men who still know the true worth of the dependable steam engine. They are still building that high class product so many American Thresherman and Farm Power readers are familiar with.

No—the steam tractor is not dead; nor will it ever be discarded; for in territories adapted to its use certain kinds of work can be done most efficiently and economically by the familiar steam traction engine.

The vapor from gasoline is heavier than air. It settles to the floor and runs along the floor much as a steam of water would, only that it is an invisible stream.

PERHAPS the plaintive peeps of the small chicks are worth attention. Mr. L. E. Pennewell of Brooklyn, Wisconsin, found this to be the case.

One morning he was attracted by an irritated chirping on the part of his flock of four hundred and twenty youngsters. Mr. Pennewell is a busy man. He was ready to pull out with his 14-28 tractor, prepared to make a long June day show results. He took time, however to linger a moment and watch his metal chick-house.

Soon he saw an evil eye peering from under its foundation. A big rat was preying on the flock.

Mr. Pennewell secured his big jack. The light metal house was raised about six inches and blocks



Some the Rat Did Not Get.

were placed under it. Meanwhile the young Pennewells, three in number and small in size, were armed with boards. They patrolled the edges of the house, and they formed a dangerous clan. Mr. Pennewell crawled under the little house. Piled in a bunch were forty-eight little bodies, still warm.

Mr. Pennewell was an angry man. He felt as if he was searching for a human murderer. He prodded around in the dirt and unearthed that rat; and right there he handed out red-handed justice. As he remarked to us, "I only wished that rat had forty lives, so I could have taken every one."

Even in these days, when a man with a tractor can do twice the work he did with teams in the old days, it

pays to watch the chickens. When a young cockerel is worth, for eating purposes, what a pure-bred rooster was once worth for breeding, every one is worth watching. Aside from money values, no man likes to think his stock or fowls are at the mercy of a predatory rat.

Mr. Pennewell journeyed to the



The Building Raised, to the Rat's Discomfort.

field in a seething state of mind. The tractor did a record day's work. While the rat was in no way deserving of credit for this, we venture the guess that his death was the cause.

The Pennewell farm is a fine, large place. Mr. Pennewell has been unable to get farm labor. His nearest town has a condenser that pays boys a higher rate of pay than the neighboring farmers can pay to men. Every minute of Pennewell's day must produce results. Pennewell regards his work on the rat as the best half-hour he has spent this summer.

Needless Camouflage

He had just hung out his shingle. That morning a stranger entered. The doctor asked to be excused as he hurried to the phone.

Taking down the receiver, he said: "Yes, this is Dr. Whoosit. Yes, I'll be ready for you at two-ten this afternoon. But please be prompt for I am very busy. Two hundred dollars? Yes, that was the estimate I gave you."

Hanging up the receiver, he turned to the stranger and, rubbing his hands, asked: "Now, sir, what can I do for you?"

"Nothing," replied the stranger, quietly, "I only came in to connect up the telephone."—*Oral Hygiene.*

What Charlie Got

At the conclusion of the school term prizes were distributed. When one of the pupils returned home his mother chanced to be entertaining callers.

"Well, Charlie," asked one of these, "did you get a prize?"

"Not exactly," said Charlie, "but I got a horrible mention."—*San Francisco Argonaut.*



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"Your Goodyear Cord Tires on our truck go right through the plowed ground of our citrus groves, permitting loading at the trees, and they protect the fruit, particularly the lemons, which are very delicate, by smoothing the haul to the packing house. They save labor, fruit, time."—H. J. Kelly, Packing House Manager, Charles C. Chapman Ranch, Fullerton, California

IN rural hauling like this and in farm duty radically different, the use of Goodyear Cord Tires on trucks has been found productive of a variety of important advantages.

Their traction has increased truck utility for farmers, ranchmen, fruit growers, dairymen and others, particularly owners of motorized farms, by enabling easy hauling through soft fields.

Their cushioning has effected continuous savings in the marketing of delicate vegetables, fruit, dairy products and of eggs and livestock, all of which suffer on slow, jarring solid tires.

Their nimbleness often has accomplished more hauling with less driving and resulted in a quicker feeding of power machinery while releasing hands and saving time for farm work.

Throughout extended terms of service these virtues have been delivered with the stout reliability developed in Goodyear Cord construction by manufacturing methods that protect our good name.

Farmers' various accounts of their successful use of Goodyear Cord Tires on trucks can be obtained by writing to The Goodyear Tire & Rubber Company, Akron, Ohio.

GOODYEAR

CORD TIRES

The Apple of Your Eye

Country boys are ripening into manhood over all the hills and dales of America. Some of them are destined for city careers. Others will go a-wandering after vanishing rainbows or grow up to be the tumble-downs of tomorrow. But most of these sons of today will be the successful farmers of the future.

What ambition guides the boy who is the apple of *your* eye? Nothing in life is more important than the training of your sons. If the boy is temperamentally fitted for the city, let him go, but *if he has a bent toward farming be sure that he has every chance to find it out*, lest the rainbow tempt him away.

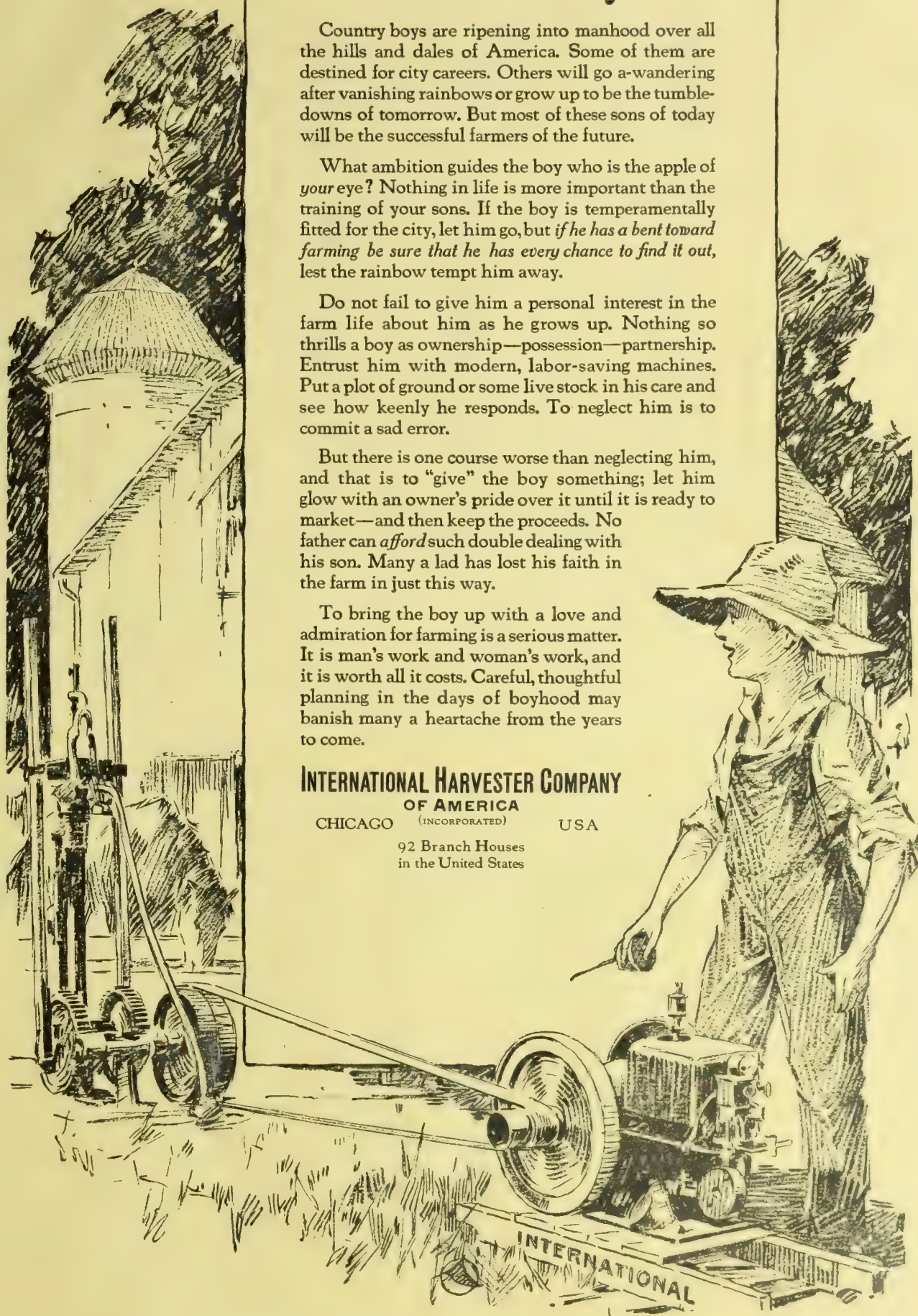
Do not fail to give him a personal interest in the farm life about him as he grows up. Nothing so thrills a boy as ownership—possession—partnership. Entrust him with modern, labor-saving machines. Put a plot of ground or some live stock in his care and see how keenly he responds. To neglect him is to commit a sad error.

But there is one course worse than neglecting him, and that is to "give" the boy something; let him glow with an owner's pride over it until it is ready to market—and then keep the proceeds. No father can *afford* such double dealing with his son. Many a lad has lost his faith in the farm in just this way.

To bring the boy up with a love and admiration for farming is a serious matter. It is man's work and woman's work, and it is worth all it costs. Careful, thoughtful planning in the days of boyhood may banish many a heartache from the years to come.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
CHICAGO (INCORPORATED) USA

92 Branch Houses
in the United States



Makes Short Work of Corn Husking

CORN husking and fodder shredding is just one more of the many jobs of farm work best done with the power of a Case Kerosene Tractor. Just another instance of the remarkable adaptability, that with proper management, will keep a Case Kerosene Tractor profitably employed during every month in the year. Day after day—job after job; the "Case" is capable of delivering more than its rated power at either belt or draw-bar.

Case Kerosene Tractors are built in standardized design in 10-18, 15-27 and 22-40 H. P. They are similar in all essential features, differing only in such details as are necessitated by differences in size and power.

All have the snappy, flexible, four cylinder motor, mounted crosswise on the frame; forged, cut-steel, spur gears, running in housings that exclude all dust and grit and retain a supply of lubricant; the Case Air Washer, which prolongs the life of the motor by delivering clean air from which all dust and grit has been washed and strained.

Write for catalog showing all the reasons for the superiority of Case Kerosene Tractors.

J. I. CASE THRESHING MACHINE CO.

(INCORPORATED)

Dept. DJ-10, Racine, Wis., U. S. A.

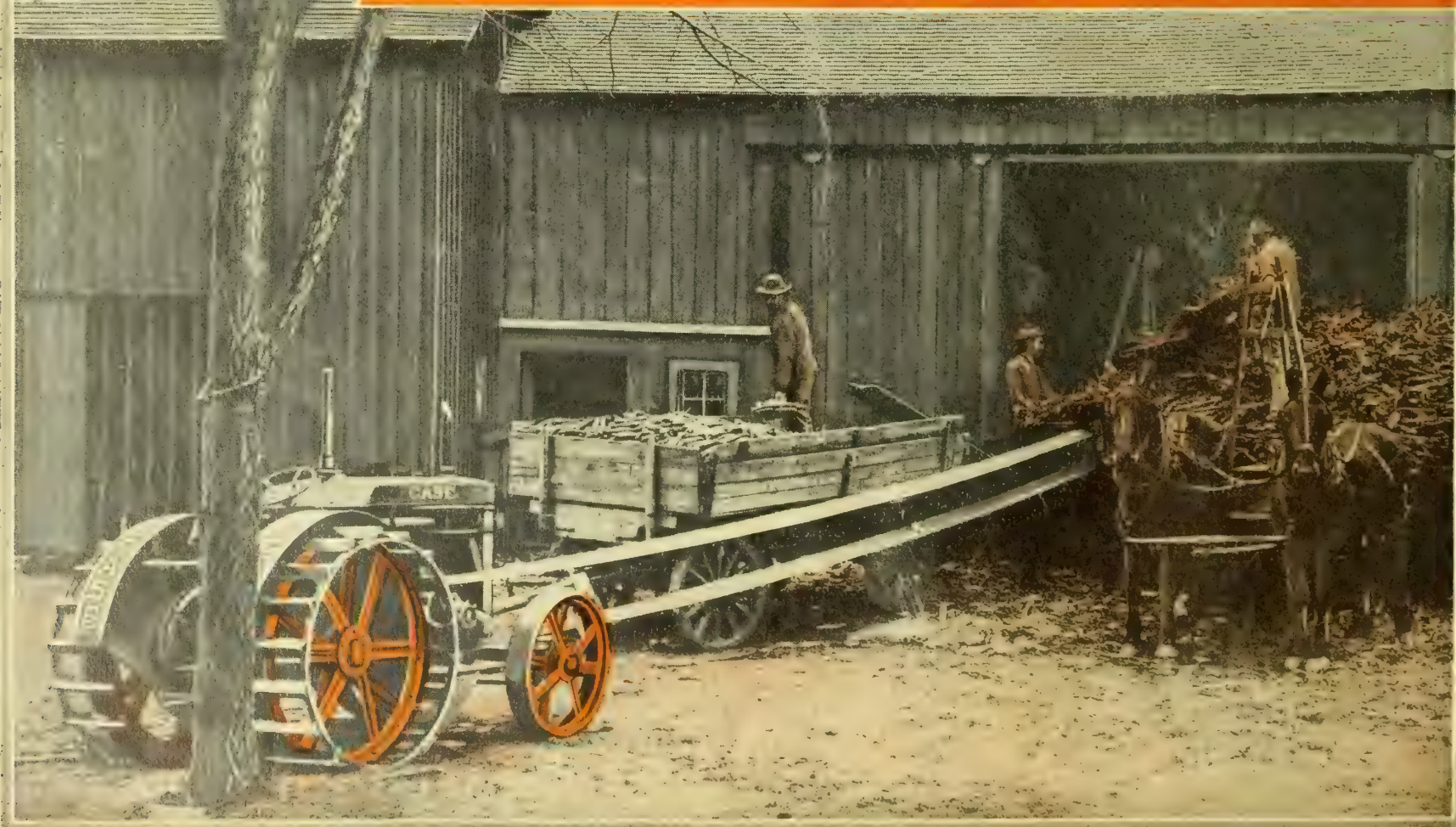
Making Superior Farm Machinery Since 1842



Look for the
EAGLE
Our Trade Mark

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

CASE
TRADE MARKS REG. U. S. PAT. OFF. AND IN FOREIGN COUNTRIES.
KEROSENE TRACTORS



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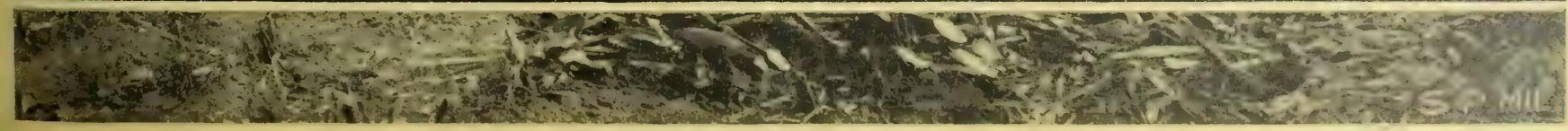
The **AMERICAN THRESHERMAN AND FARM POWER**


MADISON, WIS.

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Using the tractor for silo filling
GOODYEAR KLINGTITE FARM BELTS
Need no breaking in

Copyright 1920, by The Goodyear Tire & Rubber Co.

Co-Operative Farm Power and Goodyear Belts

Nine farmers co-operate in the use of a tractor, a separator and a silo-filler on their farms near Rock Falls, Ill. One of them, John McNeil, of The Ideal Threshing Company, owns the tractor and the silo-filler; the separator and the belt that is turned to one job after another belong to the association. Mr. McNeil directs the operations for all, and the Goodyear Klingtite Belt furnishes economical, trouble-free transmission of power for the entire enterprise.

They got their Goodyear Klingtite Belt as standard equipment on the separator. When the accompanying photograph was taken, a year ago now, the belt had finished the threshing for all nine farmers and was delivering on its fifth silo-filling job of the season that uniform power necessary to the steady forcing of ensilage up the stack pipe.

Its records tell the story of the Goodyear Klingtite's operating efficiency. It carried the power for filling a 12' x 50' silo in 12¾ hours, and for filling another, 16' x 30', in 14¼ hours.

The factors of belt efficiency noted by Mr. McNeil as distinctly Goodyear Klingtite in character are these: power delivered unfailingly and in full, freedom from the troubles farmers experience with other belts, and work done with the speed and zest of an old-fashioned farming "bee." Whereas with other

belts he has known, belt dressings had to be used, and then only partial relief from slippage was gained, the friction-surfaced Goodyear Klingtite Belt needs no dressing and holds the pulleys with equal certainty in threshing and in the straining drive of silo-filling.

It needed no breaking in. Heat, cold and moisture have not affected it. Where other belts gave trouble through stretching, the Goodyear Klingtite Belt has never compelled a re-setting of the engine or a loss of time for taking up slack. It has run loosely, thereby favoring the engine bearings, where other belts had to be run taut, and then watched very closely to prevent overheating of the bearings.

This is the uniform experience of farmers with Goodyear Klingtite Belts. Whatever farm power work is demanded of them, they respond with economy, efficiency and long life. They are made to serve farm needs and to work with a sense of the value of the farmer's time. Like Goodyear Cord Tires for trucks, they are built to protect our good name. The functions of Goodyear products in modern farming are described in the Goodyear Farm Encyclopedia. Write to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California, for a copy.

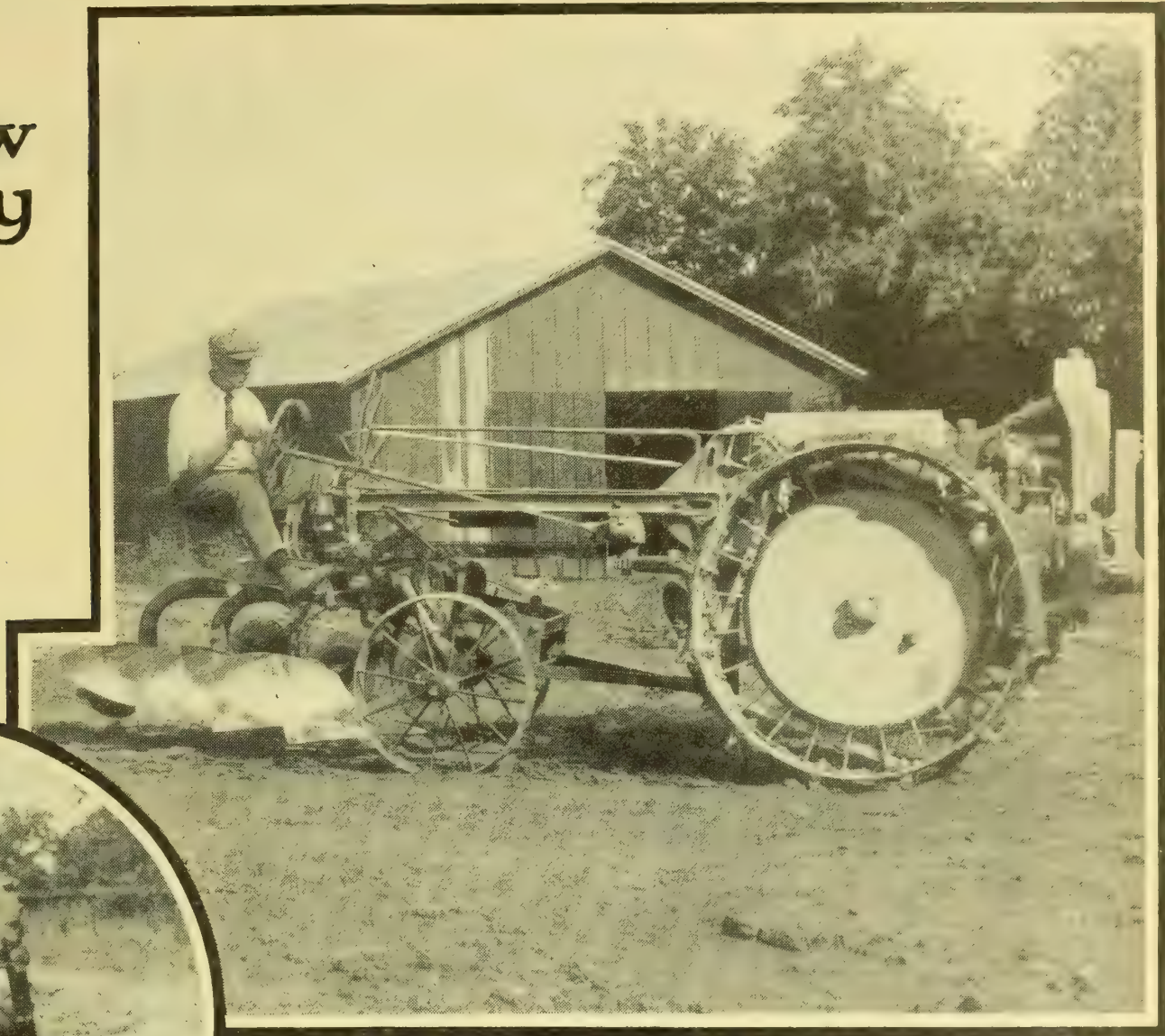
GOODYEAR

KLINGTITE BELTS

MOLINE

The Universal Tractor

3-2 Plow
Capacity



The Moline is unique in
the tractor field—made so
by our patent protection.

It is the correct farm power unit, doing all belt and field work,
including cultivation, with one man.

Engineering and manufacturing development of the Moline Tractor
and Moline Tractor Plows enable us to announce a 3-2 Plow for
use with the Moline Tractor.

3 plows for ordinary conditions which prevail in most sections
of the country.

2 plows for extreme conditions and unfavorable seasons.

An average saving of 4.7 horses per farm, and a total average sav-
ing of \$1,408.16 per year, is reported by yearly Moline tractor per-
formance records received from owners to date. We will be glad to
give anyone interested the opportunity to personally inspect these
records.

*If desired you can use the "drag behind" or horse
drawn implements you now have with the Moline
Tractor the same as with other types of tractors*

See Your Moline Dealer or Write Our Nearest Branch at:

Moline
Atlanta
New Orleans

Dallas
Oklahoma City
St. Louis

Poughkeepsie
Baltimore
Los Angeles

Indianapolis
Stockton
Spokane

Portland
Salt Lake City
Columbus, Ohio

Denver
Kansas City
Omaha

Minneapolis
Jackson, Mich.
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MOLINE PLOW COMPANY, MOLINE, ILLINOIS

HYATT

ROLLER BEARINGS

For Windmills

An actual test was made of two windmills.

One, equipped with plain bearings, pumped 3,140 gallons of water with an average wind of 8.25 miles per hour.

The other was a mill of the same diameter with the same height of tower, *but equipped with Hyatt Roller Bearings*. This pumped, during the same period of time with a lighter wind averaging 7.83 miles per hour, 4,025 gallons of water — *an increase of 885 gallons, or 28.1%.*

The Hyatt-equipped mill pumped water in a wind that would not even turn the wheel of the other mill.

Furthermore, Hyatt Bearings in windmills need to be oiled but once a season. They serve permanently and quietly for the lifetime of the mill without ever requiring adjustment.

Such is the increased efficiency that Hyatt Bearings bring to all farm machinery, including tractors, trucks, plows, grain binders, threshers, ensilage cutters, etc.

Send for the Windmill Folder

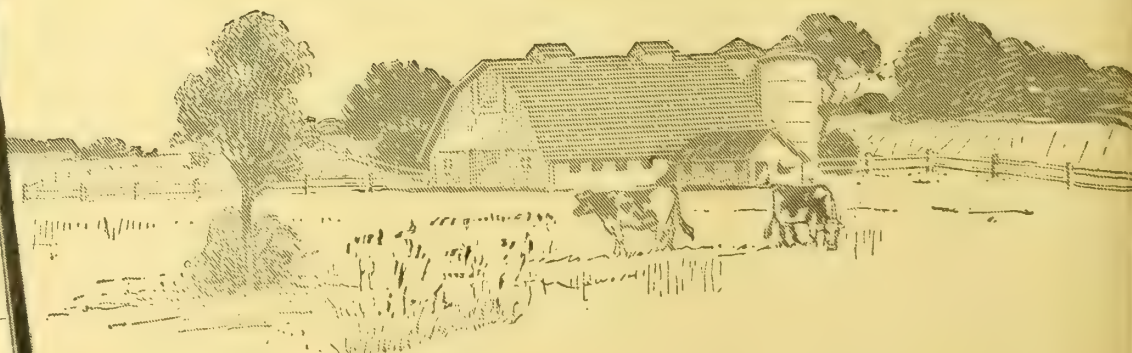
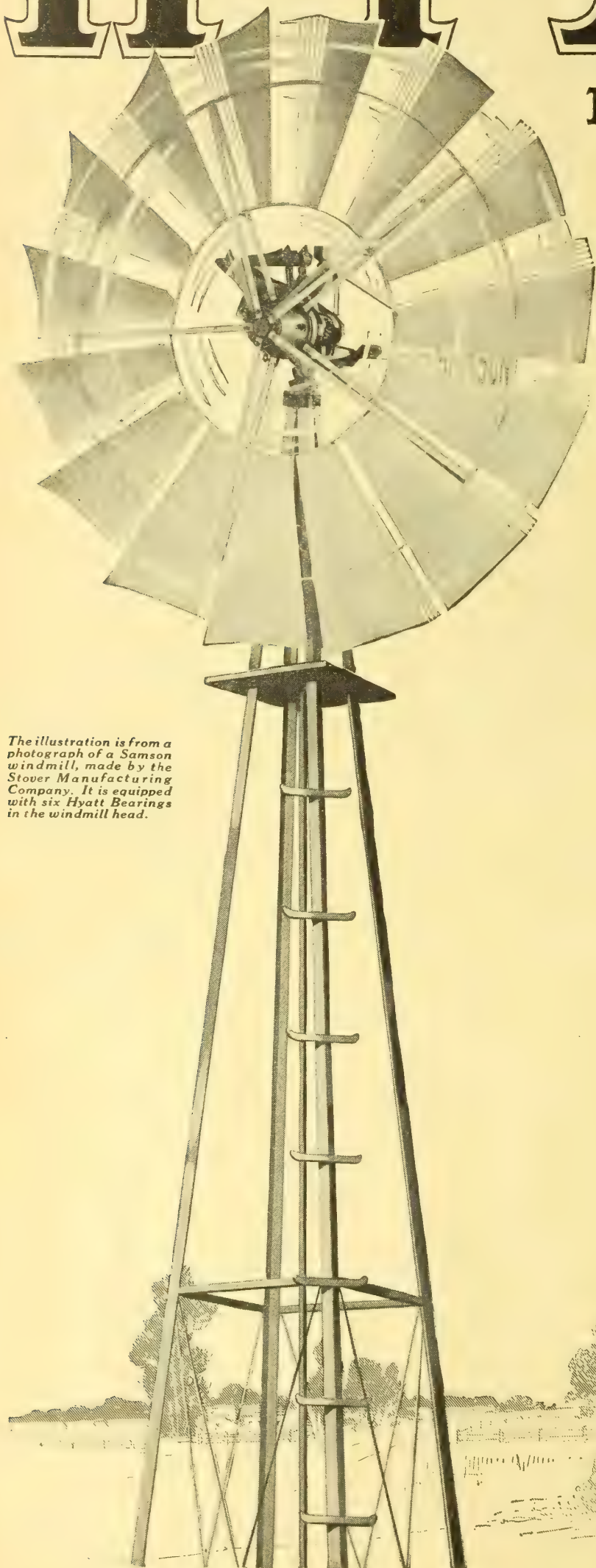
HYATT ROLLER BEARING COMPANY

Tractor Bearings Division, Chicago

Motor Bearings Division
Detroit

Industrial Bearings Division
New York City

The illustration is from a photograph of a Samson windmill, made by the Stover Manufacturing Company. It is equipped with six Hyatt Bearings in the windmill head.



The AMERICAN THRESHERMAN AND FARM POWER



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Chart of Recommendations
for TRACTORS
(Abbreviated Edition)
How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for all Tractors.

NAMES OF TRACTORS	1923		1919		1918		1917		1916	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
All-Chalmers, Green (Purpose)	A	A	A	A	A	A	A	A	A	A
All-Work	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Appleton	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery and other, 18-30	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 24-30	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 30-40	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 40-50	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 50-60	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 60-70	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 70-80	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 80-90	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 90-100	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 100-110	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 110-120	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 120-130	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 130-140	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 140-150	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 150-160	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 160-170	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 170-180	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 180-190	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 190-200	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 200-210	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 210-220	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 220-230	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 230-240	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 240-250	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 250-260	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 260-270	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 270-280	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 280-290	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 290-300	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 300-310	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 310-320	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 320-330	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 330-340	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 340-350	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 350-360	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 360-370	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 370-380	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 380-390	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 390-400	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 400-410	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 410-420	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 420-430	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 430-440	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 440-450	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 450-460	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 460-470	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 470-480	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 480-490	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 490-500	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 500-510	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 510-520	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 520-530	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 530-540	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 540-550	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 550-560	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 560-570	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 570-580	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 580-590	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 590-600	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 600-610	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 610-620	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 620-630	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 630-640	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 640-650	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 650-660	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 660-670	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 670-680	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 680-690	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 690-700	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 700-710	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 710-720	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 720-730	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 730-740	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 740-750	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 750-760	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 760-770	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 770-780	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 780-790	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 790-800	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 800-810	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 810-820	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 820-830	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 830-840	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 840-850	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 850-860	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 860-870	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 870-880	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 880-890	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 890-900	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 900-910	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 910-920	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 920-930	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 930-940	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 940-950	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 950-960	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 960-970	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 970-980	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 980-990	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Avery, 990-1000	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB

Tractor Shortage!

A problem which every farmer must face

FOOD is the reconstructor of nations. In their efforts to regain a normal peace production, European Peoples are bidding their bottom dollar for food—and machinery to produce food.

Here in America, lack of man power has for some time caused a scramble for farm machinery. Authoritative sources predict a serious shortage of tractors.

This condition makes it more important than ever that the farmer get the utmost service from his tractor. New tractors may be hard to get. In any case the replacement cost will be high.

In the conservation of the tractor no one thing is more important than scientific lubrication.

Working constantly in a cloud of dust and grit, farm tractors demand lubrication of the highest quality. These lubricants, to be efficient, must be scien-

tifically correct for the engine of the particular make of tractor on which they are used.

The Vacuum Oil Company has for years been recognized as an authority on scientific lubrication. Gargoyle Mobiloils when used as specified in our Chart of Recommendations have time and again proven their superior value in actual savings of oil and fuel and in greater power delivered.

The Chart shown here will tell you exactly what grade of Gargoyle Mobiloils will enable you to get most power and longest service from your tractor.

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15- 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.



Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC BRANCHES:	New York Boston	Philadelphia Pittsburgh	Detroit Chicago	Minneapolis Indianapolis	Kansas City, Kan. Des Moines
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The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, SEPTEMBER, 1920.

No. 5.

Ten Years Behind the Throttle

An Illinois Thresherman Holds the Record

TEN years at the same old threshing stand is a record demanding attention. Amid the uncertainties of farm life, it sounds unbelievable; yet here are the facts.

Mr. A. Fletcher, of Winnebago, Illinois, has been dispensing custom business from his steam engine for ten years. He began business with fourteen customers; and he still has the same fourteen customers, no more, no less.

Fletcher's first year in the custom threshing game was 1909. He sort of sized-up his field. In 1910, he made arrangements with fourteen Illinois farmers to handle their grain threshing. He told them he would try to make the rounds as quickly as possible, and to do a good job.

Twelve of these fourteen men owned their farms. They still own them, and to them and their sort we owe a great vote of thanks. In a time when farm labor is scarce and restless, they are on the job every day; and without this sort of farmer, we might be facing a real food-shortage in this great country.

On the two additional places in his 1910 threshing round, there were renters. One of these farms has changed hands once, the other has changed twice; but the new renters have heard of the quality of Fletcher's threshing, and each has welcomed a chance to fit into the former tenant's place in Fletcher's schedule for the season.

This sounds like a record. For the eleventh season Mr. Fletcher is making the rounds of the original fourteen places. Since President Wilson's announcement on the "fourteen points," the number has been regarded as unlucky. Mr. Fletcher says it has brought him all kinds of luck.

Some of the readers of this article may have threshed for many customers, year after year. If any reader can equal the Fletcher brand of service, let him write The American Thresherman and Farm Power, or else forever hold his peace.

Mr. Fletcher did not announce to the Associate

Editor of Uncle Sile's paper that he holds any record, for he is a quiet-spoken man who finds his greatest interest in doing a good job of threshing for the farmers of his community. He remembers his friends and stands by them; that is one reason why his customers stand by him.

Here is an instance. John Schunecht is a

As years go on, Schunecht grows less grain, and the long haul becomes correspondingly more expensive for Fletcher. Mrs. Schunecht has implored old John to abandon the custom run. It would seem logical for Fletcher to get a new "water-boy," and for John to get another threshing rig. Nothing doing! Fletcher and John still

work together. Last year John had to wait until the last for his threshing, so this year the crew pulled to his place and made John's the first job.

About the time the Associate Editor was crawling under the fence, the bundle-wagons were bringing in the last load of old John's oats. When the machine shut down, there were two hundred and ninety-four bushels of oats in the bin. At four cents a bushel, (Fletcher's 1920 rate) the six-mile trip and the entire job had netted less than twelve dollars.

This may sound like poor business. Maybe it is; but—remember Fletcher has kept the same fourteen customers

for ten long years. He has no turn-over expense.

Speaking of costs, Fletcher has found it necessary to advance his custom rates. There have been price-cutters in his sections, too; two threshermen near Rockford tried to secure business in Fletcher's section by offering to thresh oats for two and one-half cents, wagon-box measure. Needless to say, they got no business from Fletcher's old friends.

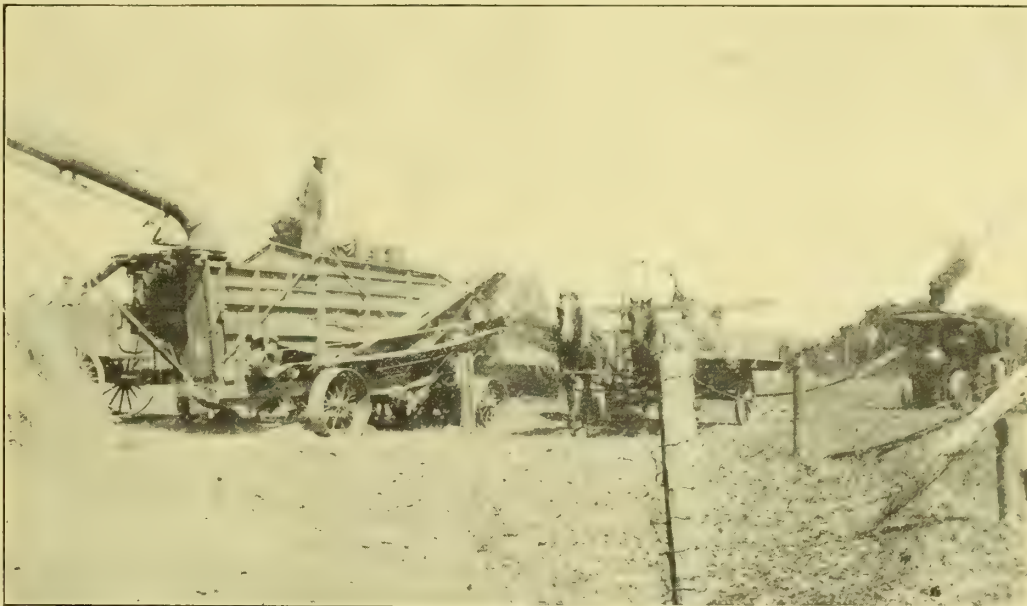
Here is a table which shows comparative prices in 1910, when Fletcher started; in 1919, when costs had increased greatly; and in 1920, with abnormal conditions:

	1910	1919	1920
Oats.....	2	3	4
Barley.....	3	4	6
Wheat & Rye..	4	7	8

If these rates seem low, remember that Fletcher buys no coal. Each farmer buys and hauls the coal needed for his own threshing.

Fletcher hires two men,—a separator boss and the water-hauler. Last year he paid them five dollars a day. This year he expects to in-

(Continued on page 50.)



Fletcher Bought This Outfit at His Own Price.

middle-aged farmer living far south of Fletcher's compact group of customers.

When Fletcher started as a custom man, he hired Schunecht as his water-hauler. Schunecht farms a small place of twenty acres, but, from the first, he wanted Fletcher to do his threshing. To do this work, Fletcher was forced to make a hard six-mile trip with his outfit.



This Looks Like a New Engine—Yet It Is Eight Years Old.



Make Sure All the Hoops on the Silo Are Tight.

Filling the Silo Is Hard Work

BY IRA G. SHELLABARGER

PROBABLY there is no season of the year when delay means so much to the livestock farmer as it does at silo-filling time. Regardless of how much preparation has been made previous to the date set for silo-filling, more or less loss of time is encountered; but much of this can be saved if some previous preparation is made.

At best, filling the silo is hard, laborious work and if every detail is not well arranged it becomes an irksome task. With the high price and scarcity of farm labor, the frugal farmer will see to it that everything moves off in harmony.

The writer resides in one of the principal tobacco-growing sections of Ohio; tobacco-cutting, wheat-sowing and silo-filling all come at practically the same time and therefore much effort must be made to secure enough help to fill our 12x31 silo; and to have all this help and teams, if much delay is encountered, means that the expense of filling the silo will be quite large.

We think we are fortunate in having our own power and silo cutting-box. Our first step is to see that all the hoops on the silo are tight and the staves in place. Our silo sets on clay soil, the wall being five feet in the ground. The silo floor is cleaned off and about two inches of clean straw or timothy hay is placed on it. This is done so that, when cleaning out the silo floor the following year, the few inches of ensilage and hay or straw may be easily gathered up and placed onto the manure spreader. The silo doors are all collected

into the silo shoot and new packing placed on them to exclude the air. In short, everything about the silo is put into shape. Next, the silo cutter is looked over and placed at the silo. The cutter knives are taken off and ground sharp; it is important to have sharp cutting knives as this will save power and the corn will go through the cutter readily and not be pulled through the knives. Also, no long shreds will be found in the silo. The tractor is next looked after and every nut and connection put in perfect order. Plenty of oil is placed near the tractor, so that it may be used without any one losing time to hunt oil when silo-filling once begins.

The above points having been attended to, the corn binder is gotten in condition by the knives being ground and well oiled. The hand corn-knives or cutters are ground in fine shape. We have some eight hand corn-knives and these are used in opening up the field. A break may also occur and if we have a number of men on the farm we always ask them to take the hand cutters and cut corn until we get the repair made. This, of course, is done only if the break is a serious one and will take several hours to repair.

It must not be inferred from the above that all those who are employed by us have no time to rest or that we expect every man and team to work to the limit; but every one appreciates that the expense is heavy and all the men try to give full time.

The day before the silo is to be filled, the corn field is opened up at each end. That is, four corn rows are cut off by hand; this is done so that it may be easy to turn with the team and binder, having but little corn broken down. We cut off one row on the outside of the field, then cut in twenty rows and cut off the twenty-first row. This leaves twenty rows to a strip. This is done throughout the entire field that is to be put into the silo, as it saves much time.

After sufficient help is secured, every man is placed or assigned to his particular place and everything moves off in harmony.

It might be added that it should be made sure that there is plenty of binder twine in the binder and on the farm. We know one farmer who did not make provision for his twine and in the midst of silo-filling he ran out of twine; and everybody had to cut by hand until another supply of twine was secured.

The number of men required to fill the silo will depend upon the distance from cornfield to the barn, and on the size of the silo cutter. If the cutter is a large one and can be fed heavily, of course more corn can be used and more teams will be required to get it to the cutter. Usually we have four teams and wagons, a man with each team and two men to each wagon in the field to load on the fodder; one man is used to drive the corn-binder and one man in the silo.

(Continued on page 50.)

Farmers Discuss Truck Possibilities

Tractor Owners Show Interest in Motor Truck Transportation

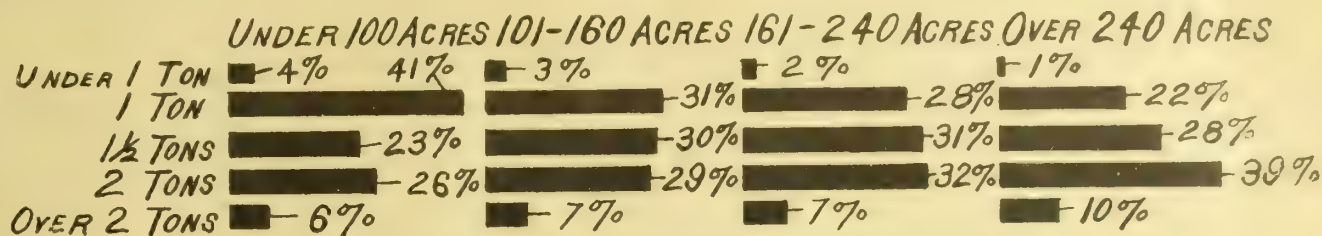
IF one is to know what the immediate possibilities are for the motor truck on the farm, he must know what farmers all over the country think about farm trucks. The opinions of four thousand eight hundred and ninety-eight farmers scattered all over the United States are now available. This information was collected by the Goodyear Tire & Rubber Company and we are able to pass it on to our readers through the courtesy of B. M. Pettit of the Truck Tire Department.

Seventeen per cent of the four thousand eight hundred and ninety-eight farmers answering Mr. Pettit's questions use trucks on their farms, the other eighty-three per cent use horses. Of the farmers not using trucks, forty-four per cent have considered buying them. This is shown in one of the accompanying charts. To quote from the report:

"We want to be conservative in the interpretation of these figures, so, in order to be ultra-safe let's assume that this investigation represents not the attitude of the total number of 6,700,000 farmers in this country but rather the attitude of the upper third or about two million farmers. We think that we could quite safely go to fifty per cent and make it somewhat over three million, but let us stick to the safe side of the fence and call it two million farmers; so, when we say forty-four per cent of the farmers have considered buying trucks, that automatically builds up in our mind possible sales within a reasonable time to forty-four per cent of two million, practically eight hundred thousand farmers

"These eight hundred thousand are now in a receptive mood and hungry for more information on the subject. They have read about trucks, some are familiar with the work being done by their neighbor's trucks, and many have witnessed the truck demonstration tours.

"Now where does this interest come from? Does it come from any particular size of farm? Does it come from any particular type of farm or any particular locality? It is worth while to notice that the reply is fairly uniform from all farmers in the terms of the acreages which they cultivate. We find that thirty-nine per cent of those replying from farms of one hundred acres or less are considering buying trucks; forty per cent of those from farms of one hundred and one to one hundred and sixty acres; forty-six per cent from farms of one hundred and one to two hundred and forty; and fifty-two per cent from farms over two hun-



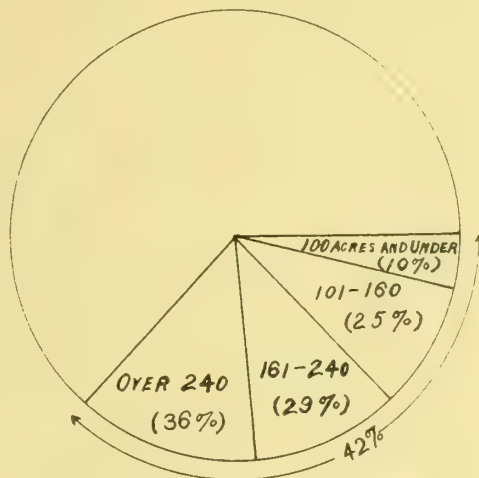
SIZE OF TRUCK PREFERRED BY PROSPECT

hundred and forty acres. We also notice the same general interest in the truck in the dairying as in the fruit belt, and in the grain field as in the livestock field. In other words, neither the size of the farm nor the type of farming has any monopoly on the interest in trucks."

The chart, "Reasons for not Buying Truck," illustrates an interesting part of Mr. Pettit's discussion. "We believe we know pretty well why some farmers have bought trucks," he says, "but what about those who have not bought trucks? We want to know if this negative is a permanent one; if they are not buying trucks, is there any possibility of showing them the real economy of this kind of hauling? With this in mind, we find thirty-three per cent of the farmers give as a reason for not buying trucks some reason that is classified as 'Financial.' We find eleven per cent give bad roads—and incidentally that is somewhat lower than we anticipated. We have felt for some time that instead of good roads preceding trucks, trucks are bringing good roads; and, in addition, this low figure would seem to confirm our opinion that pneumatics are going a long ways towards smoothing out the rough places. It might seem at first glance that since thirty-three per cent of the two million best farmers in the country gave as a reason for not buying trucks something that might be classified as financial, our previous statements concerning the purchasing power of the farmers is questionable. We find that of those who say that they do not have the cash or credit with which to buy motor trucks—motor power

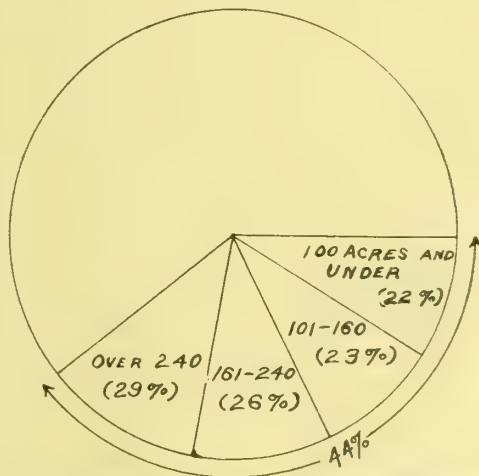
This, we believe, indicates the vast selling opportunity. Of course, before the farmer can be sold on this idea, the dealers, distributors, and all other points of contact must be convinced of the need of trucks."

Of the farmers using trucks, forty-two per cent are using tractors. This is shown in the chart, "Truck Owners Who Own Tractors." Here we find that the truck and tractor are not competitors as the smaller farmer is a less extensive user of the tractor than the larger farmer, while the truck is equally applicable to all sized farms. In fact, instead of being competitors, in many instances we find that the one is the complement of the other. The tractor owner, if not already using



TRUCK OWNERS WHO OWN TRACTORS.

a truck, is a splendid prospect for the sale of one, for, first, he is already a power user and, second, intensive production calls for intensive transportation, for transportation is the neck of the bottle.



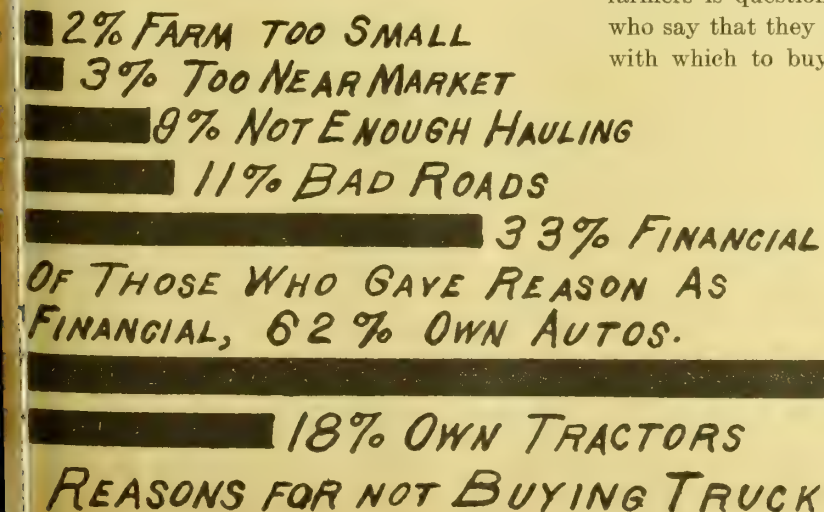
FORTY-FOUR PER CENT CONSIDER BUYING TRUCKS.

The size of truck best suitable for farm use is a subject of much discussion among truck manufacturers and salesmen as well as farmers. The chart, "Size of Truck Preferred by Prospect," shows the size of truck those farmers not yet owners of trucks are interested in. The report says:

"Regardless of the size of the farm, there is relatively little interest in a truck of less than one ton. We find a very marked interest by

those who have not yet bought trucks, in the one-ton trucks, in the ton-and-a-half and two-ton trucks. If we take this by the size of the farm, for example, we find forty-one per cent of them with farms of one hundred acres and less are interested in the one-ton truck. Of those farming over two hundred and forty acres, twenty-two per cent of them are interested in the one-ton truck, while only one per cent are interested in a truck of less than one-ton. We find in the larger acreages, thirty-nine per cent are interested in the two-ton truck, while twenty-six per cent of the farmers farming less than one hundred acres are interested in a two-ton truck. Please bear those figures in mind when we come to the analysis of the trucks now used by farmers."

In comparison to the opinions of farmers who are interested in trucks, but have not used them,



Bishop of Castle Hedingham

An Interview with An English Thresherman

By ARTHUR G. BLACKMUR

Mr. Blackmur has just completed an investigation of farm power conditions in England. Our readers should watch with interest for future articles from his pen.

Any questions about English farming conditions will be gladly answered by Mr. Blackmur. He has been a member of The American Thresherman and Farm Power family for five years and is qualified to contrast English and American methods.

TUCKED away in the Colne River valley some fifty miles northeast of London, England, lies the quaint little village of Sible or Castle Hedingham. Since Norman times the village has been renowned for its castle, but today there is a more human object of interest. This is F. G. Bishop who has, in his time, been agricultural engineer, farmer, thresherman and haulage contractor.

Mr. Bishop was expecting me and met me at the station. He very quickly ran me down to his house, with its beautiful, typically-English garden. I was then taken over to his well equipped shop, where he does his repair work and keeps his threshing rigs.

It did not take me long to realize that here I had found a progressive man, one who let no stream of information flow by without sampling of its contents.

On going into his office, with its Chippendale desk (for which many an American would give a small fortune), I could almost believe myself in America, so well was the technical press of that country represented.

We talked of many things, including the Englishman's stock subjects, the rain and roses. Of the latter, Mr. Bishop had a wonderful showing.

Finally we got around to the subject I had come to talk about—tractors. Mr. Bishop has had considerable experience with them. He owns a 25-horse power Saunderson tractor which he sometimes uses for threshing work, but he finds it more expensive and not as reliable as steam. Mr. Bishop has repaired many tractors, and the chief fault he has to find with American tractors is that the wheel construction is not heavy enough. I have heard this complaint elsewhere, so it is probably true; and I think it would be well for American manufacturers to investigate this point before selling tractors in England.

Mr. Bishop has the opinion, which I share, that

the future is with the small tractor. In his opinion, the day will soon be here when every English farmer will own his own tractor. He said at present the great difficulty was deliveries, and a lack of skilled help. The latter obstacle is, in this section of the country, being rapidly overcome by the farmers' sons doing the mechanical work. The farmers' sons, by reason of their experience with automobiles and motorcycles, have had more mechanical experience than the ordinary run of farm laborers.

He expressed the regret that he did not still own the three farms he had a few years back, for he was sure that he could farm them far more profitably and with more ease than was possible in the past.

Like the majority of us, Mr. Bishop has some work that is a hobby. His hobby is welding. He has an oxy-acetylene outfit for outside work, and an electrical welding outfit for shop use. The latter he made himself, and it does the work. He generates his own electricity by connecting up one of his steam engines, that he uses for threshing work, with a dynamo. Today the great bother in England is to get spare parts and other supplies. When a water tube breaks off, the great shortage prevents him from putting in a new tube. To obviate this difficulty, he welds another piece on the end and back it goes until the day comes when tubes are more plentiful and the price within reach of the average man. He also uses the outfit for welding fire-box cracks, boilers, and other broken parts. Mr. Bishop finds that he can avoid the trouble of having the wheel spokes come unriveted. What he does is to weld them to the rim and they stay put.

What interested me most was the fact that he was a thresherman. He owns and operates three threshing rigs, or tackle, as they are called in England. All three rigs are of English design, both outfits and engines. Mr. Bishop tried to buy an American engine some time back, but was unable to do so. He will make another effort to get one.

Talking about organization work, it came to light that until quite recently the threshermen were unorganized. The National Threshing Machine Owners' Association has now been formed and things look a little more rosy for the threshermen. A short time back Mr. Bishop was chairman at a joint meeting of farmers and threshermen. The threshermen wanted a twenty percent increase and the farmers were only willing to give ten percent. The prices furnished for May, 1920,

average around sixteen dollars a day, when the thresherman furnishes two men. In most districts the thresherman furnishes the driver and operator; the farmer supplies the rest of the help. This is not such a difficult problem in England, as more help to the acre is employed than is customary of the American farm.

Another interesting thing is that Mr. Bishop has fitted ball bearings to his threshing cylinder. There was some difficulty at first to get the right bearings, but he managed to get the right kind for the job from the S K F Bearing Co., and these have been in for the last two years and are behaving splendidly. He thinks one year's running would pay for ball bearings, by virtue of the oil saved. He also thinks that it would be a great advantage if all agricultural machinery, even wagons, were ball-bearing equipped. I can see his point. The saving in oil is considerable and the



English Farmers Demand Hard-Surfaced Roads.

power saving would be no small item.

A user of the Pickering governor, he thinks it the best in the world. He has also very high praise for Madison-Kipp lubricators and Palmetto packing. He praised nearly all makes of American injectors, valves, tools, and accessories. In fact, I came away with an inflated head, from sharing in the reflected glory of American manufactured goods.

What was more, he swore by The American Thresherman and Farm Power. In passing I might mention that, like the rest of our readers, he has found Aunt Malinda, Uncle Silas and Parson Dickson much to his liking.

Mr. Bishop is the sort of man we are proud to have as a reader, and although Mrs. Bishop is much interested in American recipes, she treated me to a regular English country dinner.

I left the Bishops with a feeling that farm power machines and open hospitality are possessed as well by our English cousins as by us of America.

The Bishops had treated me in much the same manner as I had been treated by farmers and threshermen of means in my own country. We must all be the same sort of people.

EDITOR'S NOTE: You might suppose from the title and context of this article, that Mr. Bishop is some remote, unapproachable person. Such is not the case, Mr. Blackmur assures us. If any American thresherman feels like writing to learn about details of Mr. Bishop's methods, we feel sure this English thresherman will try to explain what he can about methods in his country.

Mr. Bishop does not live in the castle. He has no hereditary title; it simply happens that he lives in a village where a castle was the chief object of interest, and so the place received its name. Bishop is just a hustling, democratic person like yourself. He might be glad to hear that you enjoyed reading of his work.



Entrance to an English Dairy Farm.

TEXACO GAS ENGINE OIL



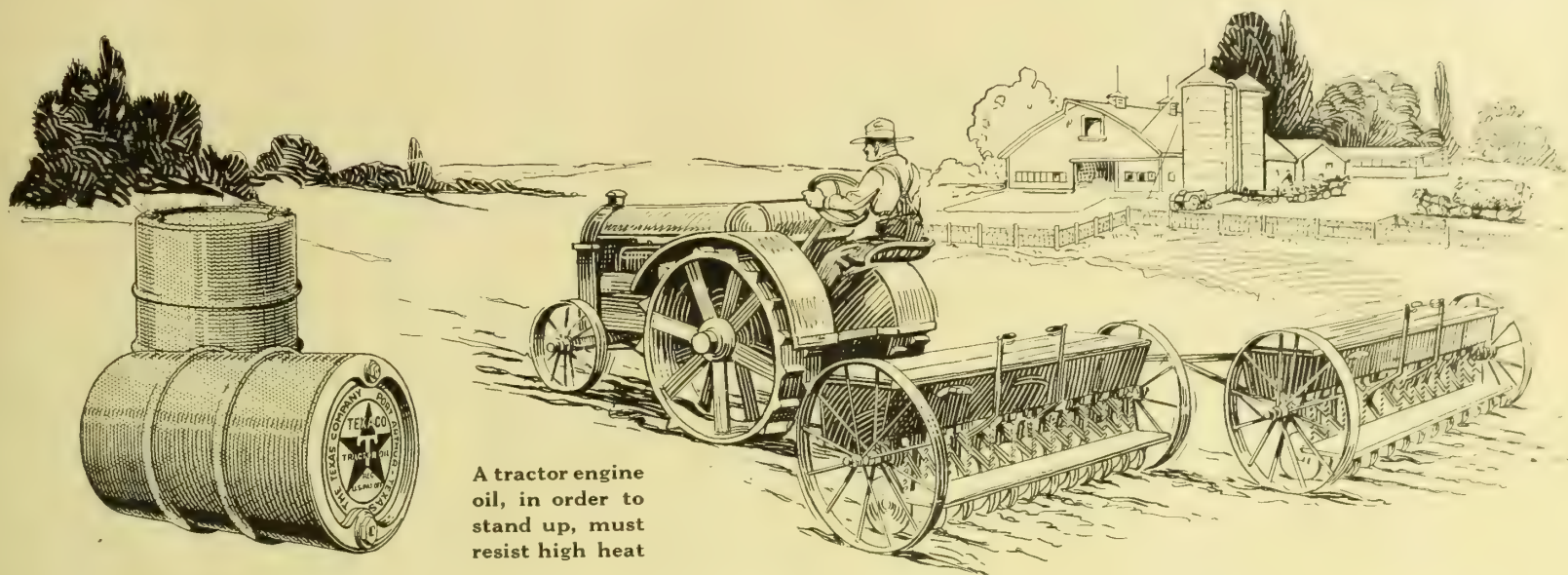
THUBAN COMPOUND



HARVESTER OIL



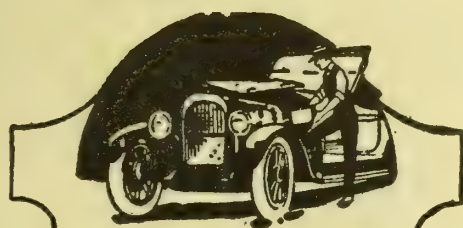
AXLE GREASE



A tractor engine oil, in order to stand up, must resist high heat

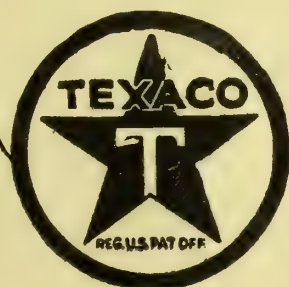
TEXACO

Tractol—for Tractors



Texaco Motor Oil

The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



The tractor engine operates under a severe strain. Full rated horse power is reached and maintained for long periods. High engine heat is developed. A tractor engine oil, in order to stand up, must resist this heat. A good tractor oil must resist dilution by the fuel. It must prevent leakage of the kerosene past the piston rings. Leakage means loss of fuel and when this occurs, stroke by stroke, the loss is multiplied. The oil must be thoroughly dependable—as repairs and replacements are hard to make and continuous operation is a vital factor in securing full return on the investment. The oil must burn clean—as ex-

cessive carbon deposits mean trouble and stops for cleaning out.

There are three grades of TEXACO TRACTOL—"B," "C," "D,"—Grade "B" for large engines in severe summer conditions. Grade "C" for large engines in winter. By "winter"—frost temperature (about 40°F.) is understood. For smaller engines use Grade "C" in summer, Grade "D" in winter.

TEXACO TRACTOL is shipped in 55 and 33-gallon steel drums, wooden barrels and half-barrels, and five-gallon cans. Try it. "You'll see a difference"—now in power, and later in your bearings.

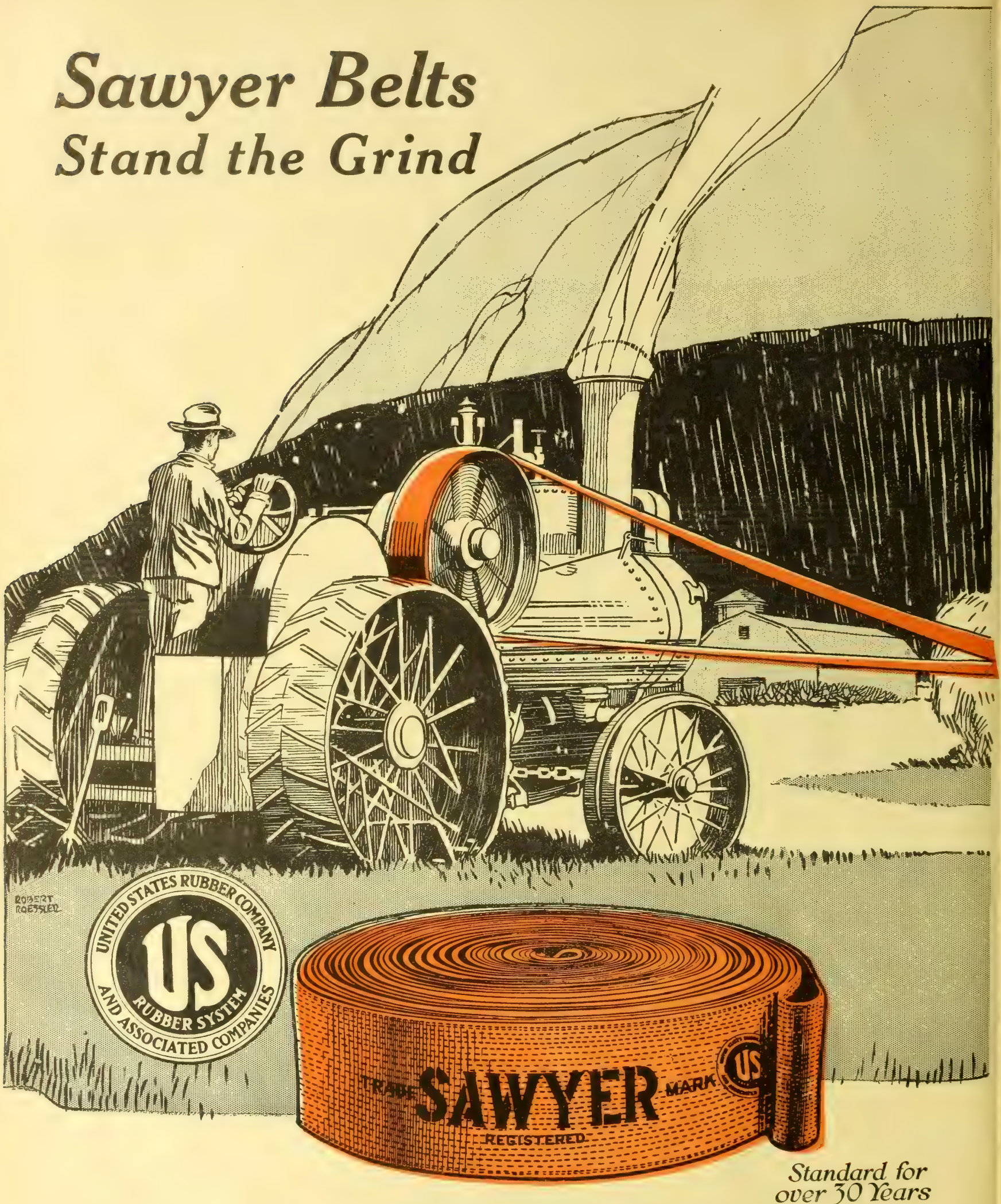
THE TEXAS COMPANY

Petroleum and Its Products

CHICAGO NEW YORK HOUSTON
OFFICES IN PRINCIPAL CITIES

"There is a Texaco Lubricant for Every Purpose"

Sawyer Belts Stand the Grind



Standard for
over 30 Years

TRADE **SAWYER** MARK
REGISTERED



THE long, steady pull in threshing demands a thoroughly reliable belt. With a *Stitched Canvas Belt* you're ready for the toughest grind, for experience has shown that this is the best belt for all farm power transmission.

For 30 years experienced power-farmers and threshermen have made the Sawyer Belt their first choice for the heavy jobs. It withstands moisture, heat and cold—has the strength and grip for the job that demands endurance. It carries *all* the power *all* the time—prevents slipping—keeps the crew “on the jump.”

When you need a new belt, be sure you get the genuine *Sawyer Stitched Canvas Belt* stamped with the “U.S.” seal. We recommend *Sabeco Belt Dressing* and pack a generous sample with each Sawyer Belt. Good dealers carry both, also full line of U. S. rubber belting, packing, radiator connections and other mechanical rubber goods.

United States Rubber Company

Endless Stitched Canvas Belts

The American Thresherman and Farm Power

B. B. CLARKE, Editor

V. V. DETWILER, Managing Editor
MARK G. TROXELL, Associate Editor
FRANK M. CLARKE, Associate Editor

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A PAGE WITH THE EDITOR

WELL, since the country has gone dry and the women can vote, it's mighty apt to stay dry for a long, long time.

WHEN you get the worst of it in a business deal, pick your flint and go in all the harder to win next time. It takes pluck to bring you luck.

ANOTHER month of political agony and then folks will be in position to take a little political vacation. Politics of the "Woodrow" variety, we hope, will be forever adjourned.

DID you ever stop to think there are single concerns today who build more tractors than all the tractor and traction engine builders in the world combined built ten years ago? And still the demand increases daily.

THERE is a famine in print paper, unless you are willing to pay a bonus for it. Then, like thirty-two cents a pound sugar which might have been obtained for less than one-fourth this sum, you can find plenty of it.

THAT wonderful chivalry, of which we Southerners boast, was sadly lacking in Tennessee, which tried to prevent the women from having universal suffrage. The solid South will have more to do at the polls now than keeping the "dam nigger" from voting.

A COUPLE of live young men with a couple of thousands of dollars each who would like to obtain farms for themselves in the fertile lands of Northern Wisconsin, if they mean business, can get a bargain right now by writing the editor. State your financial conditions, and whether you are prepared to talk United States or not.

OUR old friend, F. Lee Norton, who for many years was prominently connected with the J. I. Case Threshing Machine Co., has recently returned from a ten weeks' auto tour through the battlefields of France, and writes the editor as follows: "We drove nearly four thousand miles in France, through the occupied territory in Germany, also through England and in Scotland, and saw the most wonderful

small grain crops in all of that territory. In Germany, the people look well fed and as though they were not suffering for any of the necessities. It is true, of course, that industrial conditions are lagging, especially in France, because of the shortage in labor and fuel.

"No one who has not visited the battle fields can appreciate the awful destruction and devastation throughout all northern France. It is pitiful to see the effort being made at reconstruction, and at the same time surprising to see how much has already been done."

EDITING a threshermen's magazine is a man's size job, Ezra. Every time you tackle it, unless you are bubbling over and effervescing with thoughts which you want to pour out in a stream of uninterrupted conversation, you find this fact to be true. Of course, there were days when the thresherman had no business, when he was considered an itinerating gypsy, without chart or compass, and with little or no credit. Then you could feed him most any kind of dope and make him like it, but not so at the present writing.

In the days of old, when he was supposed to buy a machine for nothing, and thresh for less, when his food ranged from yellow-legged chickens to bologna sausage, the thresherman was looked upon as a necessary evil to be tolerated just long enough to get the job finished, pick up his belongings and take down the old dirt road to the next job, maybe receiving a "finger" for his pay, and maybe having said his "Now I lay me down to sleep," in the straw-stack the night before. Well, in those days you could feed a thresherman almanacs with tape-worm advertising, and call it good reading, but not so now.

The rural free delivery of his mail has elevated our country cousin on a par with the city chaps, some of whom he looks on now with as much contempt as he himself was looked upon 'way back yonder when this publication started the threshermen's reformation.

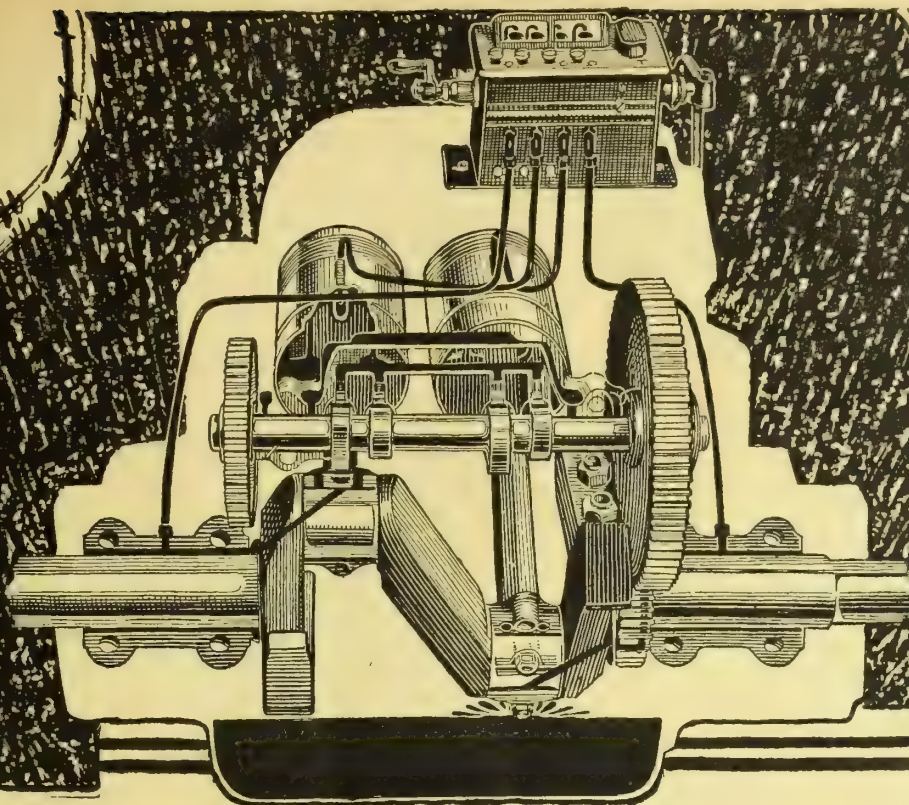
The readers of this magazine have been a loyal crowd of folks all the way, and step by step they have marched along the way of progress, often furnishing the editor

with pointers of the greatest value in his editorial work.

No business, no class of people have made better headway in the business and educational world in the last quarter of a century than the thresherman. Then he could hardly buy and pay for half of an outfit before it was worn out. Now he buys and pays cash or its equivalent. When the automobile first came into use, he had to buy the cast-off and secondhand machine. Now his family goes with him to market on week days and to church on Sunday in as good an automobile as the markets affords, and he visits friends twenty, thirty and fifty miles away on Sunday, whom he met perhaps once a year or not that often when horses and buggies were the method of travel.

In all things the thresherman has kept abreast of the times equal to the best of business men, and you can't show him an editorial tad-pole and make him believe that it's a full grown bull-frog. Then it was so easy to tear off editorials that filled the bill. Now our readers look for the best in all things, and, as an editor, I have often wondered whether I was "keeping up with Lizzie" or not.

It isn't of so much importance what you say as it is how you say it. You can ramble along over almost any subject and string out conversation, and folks will like it providing you use enough seasoning to satisfy their appetites. Did you know that bologna sausage generally tastes mighty good to a hungry man? Bologna is made out of the scraps of all the meats in the butcher shop and contains enough pepper and salt to tide you over anything that may have been tainted before being used. You taste the pepper more and the tainted meat less. In the days when I used to pose as a teacher of threshermen more than in these enlightened days, I wondered many times what to write and talk about, but nature furnished me with a gift of gab and a way of clothing thoughts to suit most any kind of a person. I've written many an obituary of persons whom I knew to be tough old sinners, and when I got through you would wonder how the Lord ever got along without them "Up Yonder" in helping Him in the management of things ethereal. It's the way you say things that counts, Ezra.



Double Assurance of Dependable Lubrication

The tractor actually rides on a film of oil. On the axles, transmission, shafts, gears, and all the moving, wearing parts, this film of oil must be maintained or trouble and destruction quickly follows.

The more perfect this film of oil is maintained, the more perfect is the operation of the tractor and the longer its life.

The Rumely OilPull motor is distinguished above other tractor motors because it gives *twice the assurance of perfect lubrication*—because it has two main systems of lubrication rather than *one*.

First, there is provided the positive, force-feed, fresh oil, Madison-Kipp mechanical lubricator which pumps a continuous flow of fresh oil to all the major moving parts—cylinders, pistons, crank shafts, crank shaft bearings, etc.

Second, the designers of the OilPull, to insure unquestioned dependability of lubrication, have added the splash system which throws a constant spray of oil to all the moving parts within the motor.

And this dual lubrication system is but one of the many features responsible for the OilPull's remarkable record of performance—which makes the OilPull supreme in quality, and cheapest in cost per year of service.

Four sizes are built—12-20, 16-30, 20-40 and 30-60 H. P.—standard in design. They are splendidly adapted for operating threshers and other belt machines—automatically regulated governor—large belt pulley driven directly off crankshaft—plenty of belt clearance, etc.

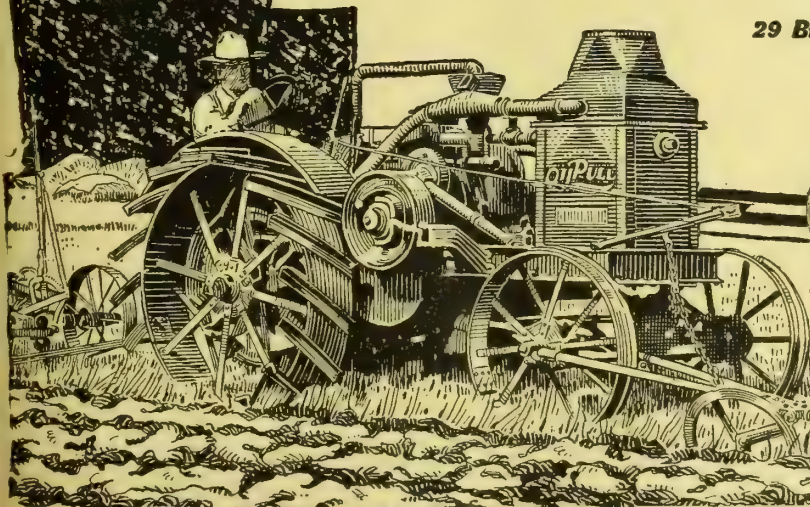
The famous Rumely line also includes five sizes of the time-proved Ideal separators.

Write for catalog.

ADVANCE-RUMELY THRESHER CO., Inc.

La Porte, Indiana

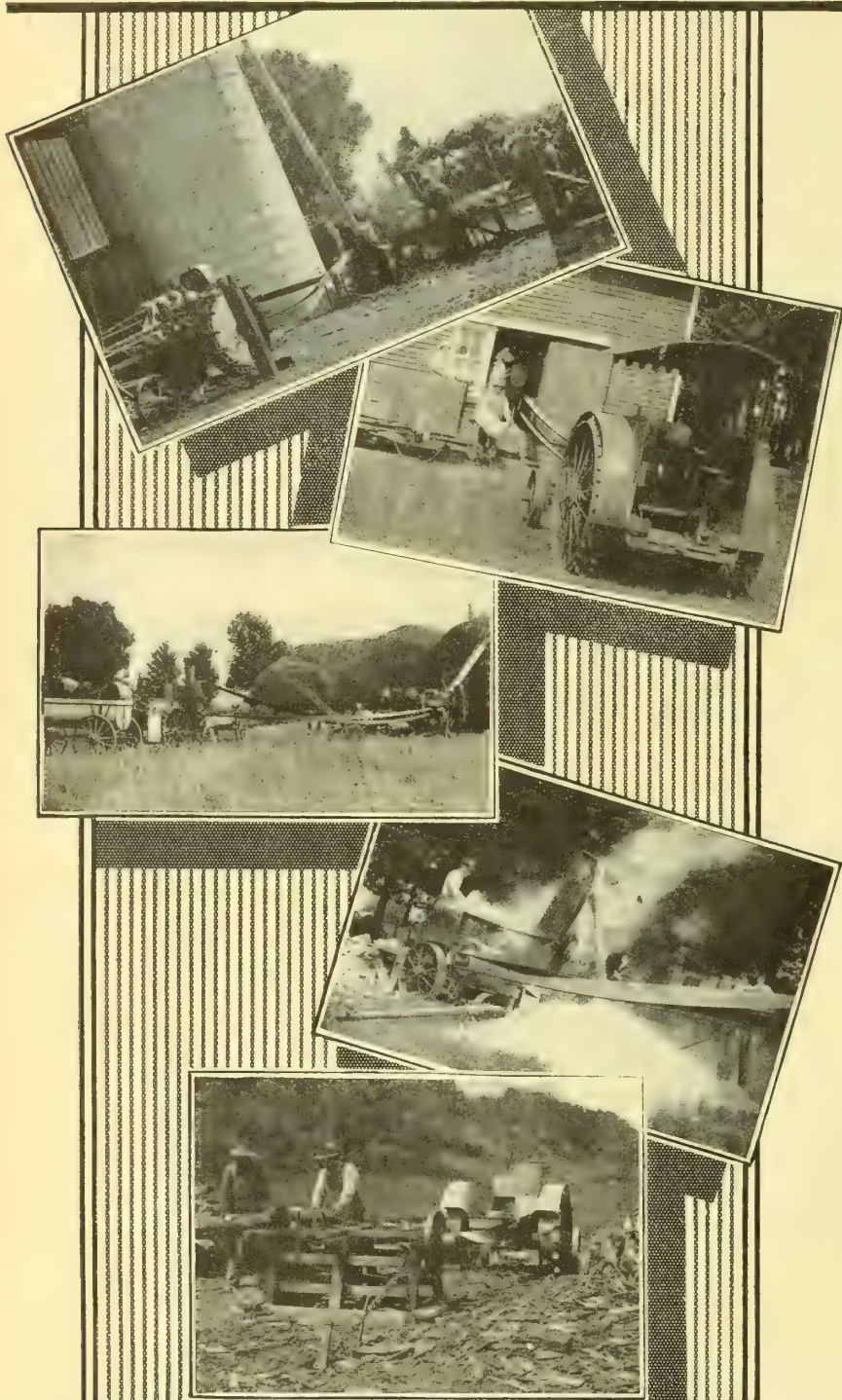
29 Branch Offices and Warehouses



At the University of Ohio Tractor Tests, January, 1920, the OilPull broke its own world's record for tractor fuel economy which it had held unbroken for eight years.

ADVANCE-RUMELY

Hettrick Canvas Belts



—and now for Fall and Winter Belt Work

Threshing doesn't put an end to the use of belts on the farm. Not by a long shot. There's feed grinding, wood sawing, silage cutting, and a lot of other jobs.

Hettricks fit 'em all. They give low cost service because they last longer. They're good canvas belts built for good farmers.

Hettrick Manufacturing Company
Toledo, Ohio

Parson Dickson's Sermon

I F yo' will read de fo'teenth an' fifteenth vuhses ob de twenty-fust chaptah ob St. Matthew yo' will find dese wuhds: "An' de blind an' de lame came to Him in de temple an' He healed dem. An' when de chief priests an' scribes saw de wondahful things dat He did an' de children cryin' in de temple an' sayin', Hosanna to de Son ob David, dey were sore displeased."

Did yo' eber in youh bawn days see a pahson doin' good deeds dat somebody didn't try to belittle him? Did yo' eber see a preachah ob de gospel dat somebody didn't dislaik? Yo' neber did. Somehow, it am paht ob human life to find fault an' to criticise. Dey tells a stohry on de late General William Booth, who done founded de Salvation Ahmy. Aftah he had 'sent his son, Ballington, to de United States, whah he was makin' great strides foh de good ob de cause, General Booth, on an 'casion ob a visit to his son, at a revival meetin' in Boston an' befoh a crowded house ob puhsons seekin' de true light, took de hymn book away from his son an' tole him, "Dat am no way to gib out a hymn."

I's not vouchin' foh dis statement but it was done tole to me by a preachah ob de gospel an' it am said dat 'kase ob dis breach ob gospel etiquette Ballington Booth seceded from de Salvation Ahmy an' founded de Volunteers ob America. De point I wants to make am not whethah de grand ole man who done gabe de wuhld an organization which has made its name immortal foh good deeds in wah an' peace did what am stated heahin, but it am 'cordin' to ouh human natuah to criticise an' find fault.

In de statement ob de text de human natuah shows up so plain dat anybody who reads will recognize de truf ob ouh human ways. Heah was de Son ob Man teachin' de fulfillment ob de bery prophecies dat de chief priests an' scribes pretended to beliebe in, yet He wasn't doin' things dah way. Dey couldn't make de lame walk nor de blind see but dey could and did criticise de one who could do both right in de temple befoh dah eyes.

Dese bery men, de custodians ob de law an' de chosen men to expound de law an' obey it, had been witnessin' de money changahs runnin' dah business wide open in de same temple whah doves an' all mannah ob muchandise were done sold foh profit undah de hypocritical plea ob "fuhnishin' de elements ob sacrifice," an' dat, widout doubt, foh a regulah pew rental in hand paid. Dey could wink at such a condition, yet when a great prophet who preached a new dispensation dat didn't fit in wid dah idea ob things came into dis bery same temple an' made a scourge an' upset de tables ob de money changahs, an' drobe out dem dat bought an' sold an' tole dem, "It am written Mah house shall be called a house ob prayah, but ye hab made it a den ob thiebs," an' den when de blind an' de lame came to Him in de temple an' He healed dem, it was a terrible thing in de eyes ob dis hypocritical priesthood, an' 'kase ob it an' ob His popularity dey done tuhned 'gainst Him.

I has seen membahs ob chu'ches join in wid oder denom'nations in de communion suhvice whah dey seemed to feel dat de bread an' wine would hab tasted bettah if it had done been suhved in dah own chu'ch.

I measures oder folks by mahself an' dat am about how all men judge oder men. If yo' am willin' to be placed in oder folks' scales as yo' wants oder folks to be weighed in youh own scales yo' won't get cheated much in de weights. I finds ebery time I invoices mahself dat dah ain't no dangah ob my cheatin'. De trouble am to gib oder folks jest as good measuah as yo' want foh youhself.

If de chief priests an' de scribes could hab healed de sick, cured de lame, an' made de blind to see, does yo' suppose dat dey would hab any argument 'bout it bein' lawful to do it on de Sabbath day or not? Oh, no, mah chilern, yo' would hab found ebery last one ob dem critics rollin' up dah sleeves an' takin' a hand in de good wuhk. Dey would hab been tellin' folks outside, "Pass along de next cripple!" "Heah, yo' blind man, step dis way an' we'll fix youh eyes so yo' won't hab to weah no spectacles foh de next fifty yeahs!"

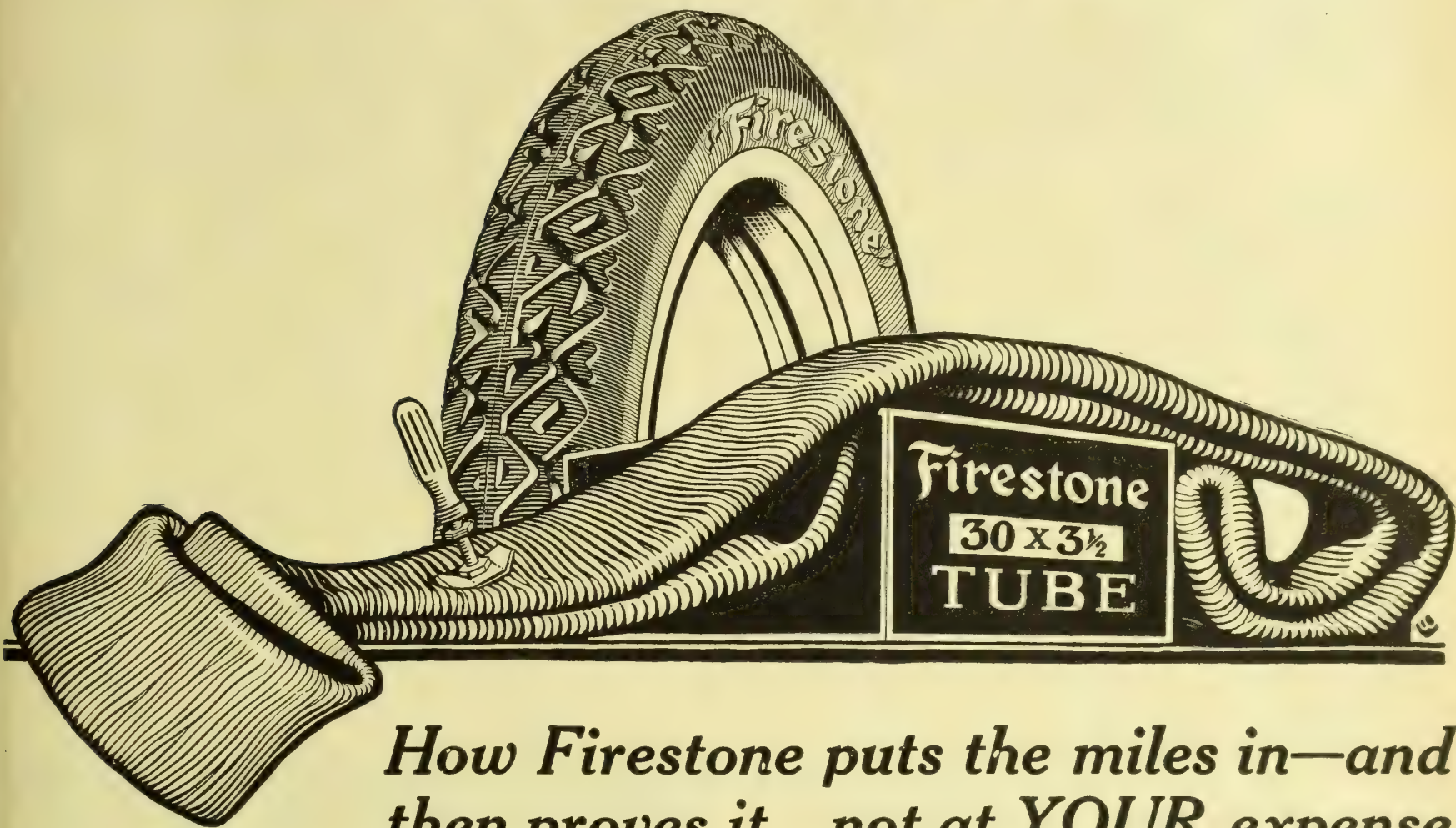
It am de selfishness ob ouh human souls dat makes us want to hab things all ouh own way. If it hadn't been foh dis spirit all ober de face ob de earth dah wouldn't hab been no long rows ob graves ober in France an' a million Rachahs wouldn't be weepin' foh dah precious boys who died upon de blood-stained battlefields ob Europe, whah oders will hab to die in de yeahs to come until we done luhn to practice as well as to preach de gospel ob righteousness.

Let de choir lead in singin',

"Oh, foh a closah walk wid God,
A calm an' heabenly frame,
A light to shine upon de road
Dat leads me to de Lamb,"

an' lookin' foh de blessin' we will be dismissed.

A big-scale road test on 3,200 tubes



How Firestone puts the miles in—and then proves it—not at YOUR expense

No other tubes in the world are road tested on so big a scale as Firestones. The Yellow Cab Company of Chicago uses Firestone Tubes exclusively on its 800 taxicabs. The service of these tubes is checked constantly—improvements and developments are arrived at.

By close watching of a large number of tubes in service—not confined to isolated instances—the conclusions are accurate and definite.

Firestone puts the best in materials into tubes by establishing purchasing experts at Singapore, center of the world's rubber market. Firestone puts the best in workmanship into tubes by organizing the crack

manufacturing organization of the industry on a profit-sharing basis.

And then subjects the finished product to this big-scale road test—in order to get you more for your tube money and most miles out of your tires.

Firestone Tubes resist heat—which everyone knows is the tubes' worst enemy. Their laminated construction, ply on ply of thin rubber sheets laid crosswise and perfectly vulcanized, gives the stoutest tube wall. Their larger sectional size means less stretch to fill the casing. Ask your dealer for Firestone Tubes. They cost no more than the ordinary kind.

30x3½ Red, \$4.50; Gray, \$3.75
Other sizes in proportion

Firestone



SOLID BELT DRESSING

Thousands of belts on thousands of tractors transmit power but in so doing hundreds of horse power are lost through imperfect transmission. Belts slip. Slipping generates heat that destroys their composition. Oil and moisture and dust contribute to the decay.

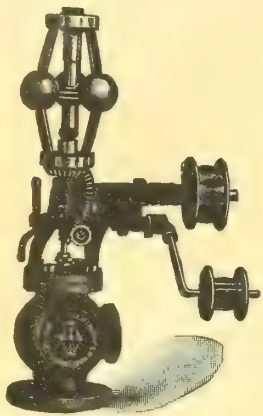
Honest dressing, such as Dixon's, maintains belting in top notch form. As long as a belt remains in its original condition of life and pliability it is worth its cost price.

Inefficiency and waste of power are crimes in times of economic stress.

A booklet on "The Proper Care of Belts" is yours for the asking. Also a trial sample if you desire. Ask for Booklet No. 22-O.

JOSEPH DIXON CRUCIBLE CO.
JERSEY CITY, NEW JERSEY
Established 1827

Mention The American Thresherman and Farm Power



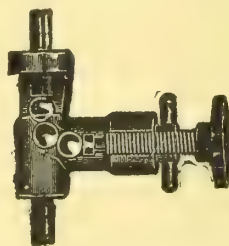
PICKERING

Equipped with

Ball Ranger Speed Changer

Fitted to every build of Engine

The standard Governor for Threshermen, because giving wide range in Speed Adjustment, and close regulation.



The most durable Governor requiring least attention.

PICKERING Oil Pumps

Simple and Reliable

Write us for particulars.

The PICKERING GOVERNOR CO.
Portland, Conn. U. S. A.



Farm Power Loses An Old Friend

THE farm power field lost an able friend when W. V. Couchman passed from this life, in the early days of August, 1920. The sincere sympathy of our editorial offices is extended to those whose close ties make this personal loss a daily sorrow.

Mr. Couchman was unique among American implement men. Born in Minneapolis two months before the assassination of the Great Emancipator, he found, after years of work from the bottom to the top of the industrial ladder, that his talents and inclinations fitted him to serve both his country and his company in foreign lands.

His first job with the old McCormick Company was that of errand

boy. At the age of twenty-one, he had become a general agent. Before reaching thirty-five, he had gone abroad to take charge of the European headquarters for the McCormick Company, at Hamburg. With the formation of the International Harvester Company, he found new positions of responsibility awaiting him, and he was faithfully and capably directing the growth of his company in Europe when the end came.

There is need of more men of Mr. Couchman's sort. Without advantages, by application and industry he reached a position not only of benefit to himself and to his company but to his nation as well.

"Brother Joseph"

'WAY out in the Pacific Ocean, at Kalawao, Moloakii Islands, is where the lepers live. Here, also, is where Ira B. Dutton, known as "Brother Joseph," resides.

This grand old man, who served his country during the Civil War in a Wisconsin regiment, volunteered his services to humanity when "Father Damien," the head of the leper settlement, died many years ago. He has lived there since, contented with what he calls his happy lot, ever ministering to these unfortunate

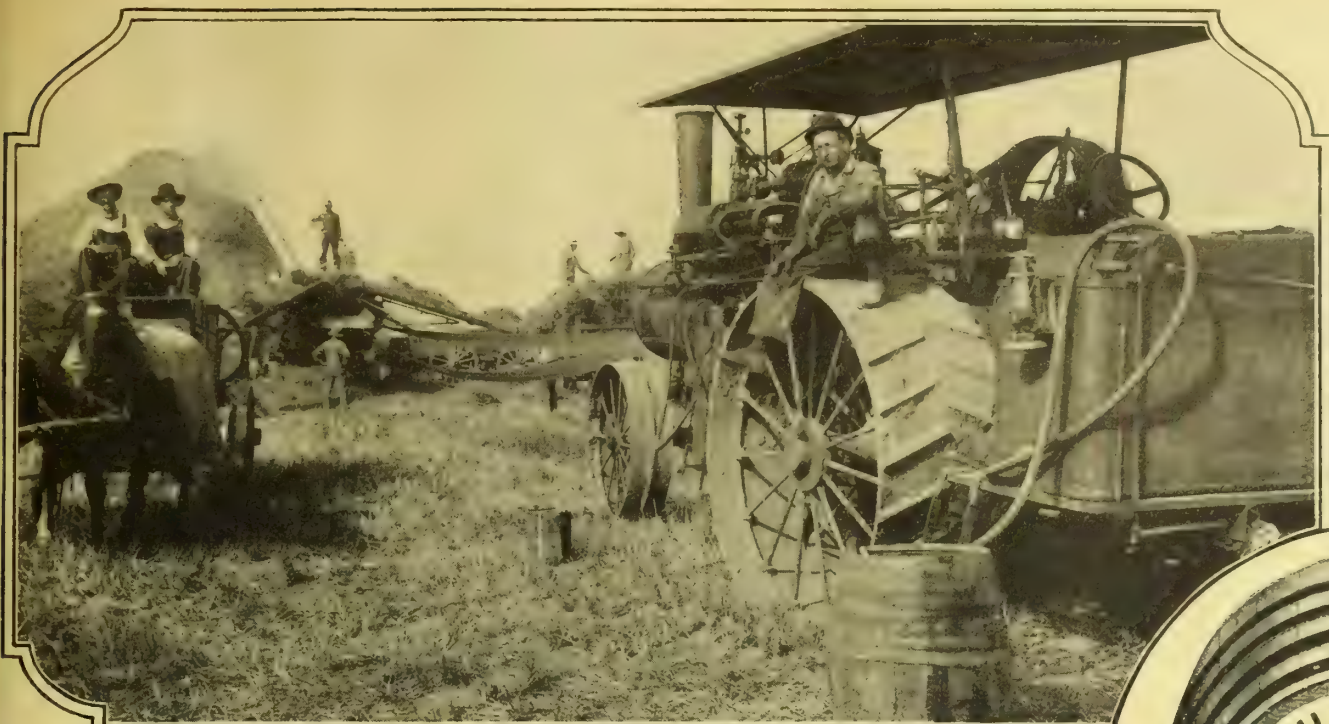
human beings claimed by leprosy.

Brother Joseph was seventy-seven years old on April 27, 1920, when this photo was taken; the picture was sent to the editor with the compliments of Brother Dutton, a happy contented, Christian gentleman, doing the "Master's work." He sends greetings to his many friends in the States, especially in Wisconsin, his former home.

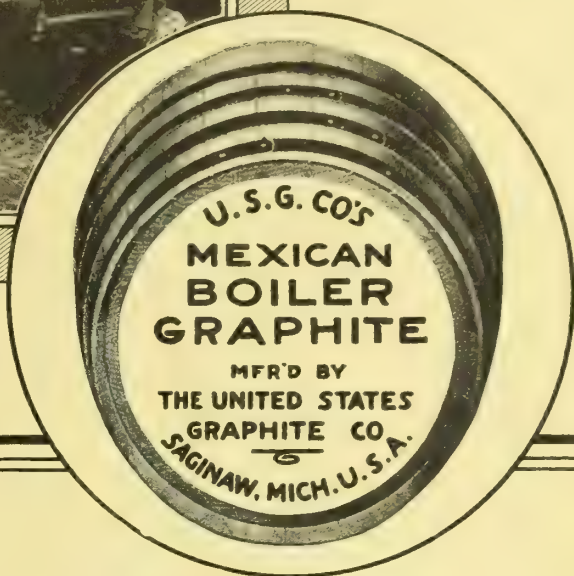
This veteran of many battles has enlisted for life. We cannot honor his courage too highly.



A Volunteer in the War Against Leprosy.



Nothing' to worry about



Behold this outfit. Slick! You said it. The first glance tells you that "everything is just right."

The good engineer has nothing to worry about. His engine is not giving him any trouble. The fact is that it's unhampered by the presence of scale.

If you know how boiler scale slows down the engine, how it weakens and deteriorates, yes, virtually "eats up" the boiler—then you'll appreciate what that means.

U. S. Mexican Boiler Graphite is the engineer's best aid against the scale evil. It's sure and safe. It completely rids the boiler of even the hardest crust and keeps new coatings from forming, and accomplishes this without harm to the boiler itself.

You should use U. S. Mexican Boiler Graphite. Your outfit, too, will then be "just right."

Mail us this advertisement, with your name and address, and we'll tell you more about it.

OTHER U. S. G. Co. FAR
PRODUCTS:

- U. S. G. Co's No. 205 Lubricating Graphite.
- U. S. G. Co's Mexican Graphite Transmission-Differential Lubricant.
- U. S. G. Co's Mexican Graphite Cup Grease.
- U. S. G. Co's Mexican Graphite Journal and Gear Grease.
- U. S. G. Co's Mexican Plumbago Axle Grease.
- U. S. G. Co's Brushes for farm lighting systems.



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Saginaw, Michigan

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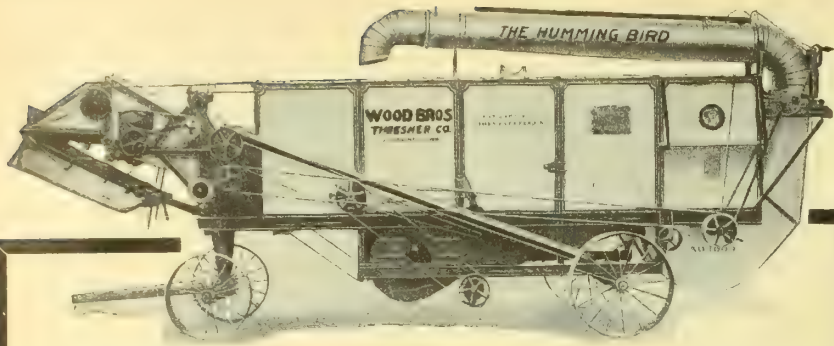
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100
Per Cent
Thresher

The Humming Bird Is a Thoroughbred

You'll find your ideal in a Wood Brothers Humming Bird Thresher. A perfectly adjusted machine that will run along day after day giving the very limit of service—without trouble—expense—or fussing of any kind.

Speed—Clean Threshing—Economy—Simplicity are all built into this wonderful machine. It has been tested by years of service in all parts of the country and has proven universally successful.

Men who have used the Humming Bird know what it will do. They've actually tested it. Their letters at the left will convince you that a Humming Bird will do your work best.

Buy it now. We can make prompt delivery—for use yet this year.

Maple Plain, Minn.
Wood Bros. Thresher Co.
Des Moines, Iowa.
Dear Sirs: About the Humming Bird Separator, would say this makes eight falls I have run this separator and it runs just as good as it did when I first got it. Will thresh anything; runs light, and easy to keep up. The cylinder teeth can't be beat for strength.
Yours truly,
GRANT BEAL.

Rochester, Minn.
Wood Bros. Thresher Co.
Des Moines, Iowa.
Gentlemen: Please ship me 14 band knives by express for my Wood Bros. feeder. This feeder has been run nineteen years. I bought it second hand, and have used it seven falls and have never had a break down or lost a minutes' time with it. I think there is no other feeder like it. It is in first-class condition and I think it will run seven or eight seasons more.
Respectfully,
M. DURYEA, Route No. 8.

WOOD BROS. THRESHER COMPANY
Makers of Separators and Threshing Engines
Home office and factory: DES MOINES, IA.
Branches at Minneapolis, Minn. Lincoln, Neb. Decatur, Ill.

If You Don't Enjoy Re-Packing Stuffing Boxes, Use

TRADE MARK
"PALMETTO"
REG U S PAT OFFICE
PACKING

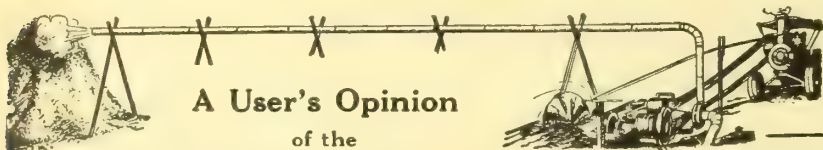
Made to give long satisfactory service under hard conditions.

Braided for rods.
Twist for globe and other small valves.
Send for working samples. No charge.

Greene, Tweed & Co.
Sole Manufacturers

109 Duane St.

New York



A User's Opinion
of the

CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower, as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs.
Yours for business,
C. S. LONG, New English, Iowa, R. D. No. 1, Box 40.

The letter explains itself. This man's blower has worked unfailingly for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO

Asked and Answered

Question of G. A. Z. Will a team of horses pull a load of two tons easier with a four-foot evener than with a three-foot evener?

Answer.—If horses when hitched to a two-ton load with a three-foot evener do not crowd each other, they can pull just as well with that as with a four-foot evener. If the horses are large and crowd each other with the shorter evener, they can have a better chance at the load with a longer one, not because the evener gives them any better purchase on the load, but because they do not bother each other. On some field operations it is found advisable, especially with large horses, to use an evener which will keep the horses pretty well apart. The advantage of this is especially noticeable at the end of the field when turning. When the horses are crowded closely together there is a considerable tendency for them to trample on each other at the end. In hot weather there is considerable advantage in having the horses well spread so as to prevent heating. Horses sometimes are killed with the heat in harvesting, where three or more horses are used abreast. If you will think back to any of these cases that you are familiar with, I believe that you will find that in every case it was the center horse which died.

Question of R. K. G. I have an 18-horse power steam engine which has a flat crown sheet, and it has been misused, causing the crown sheet to sag or bulge. I should like to know if the sheet being in this condition will cause the engine to be dangerous. In other ways the engine is in good condition and it seems a pity to junk it.

Answer.—If your engine has a badly bulged crown sheet, I should view it with considerable suspicion until it was well tested. If, however, you give this engine a good hydrostatic test and find that it is able to stand up to the pressures that should be imposed on it, I should not be at all afraid of the engine simply because the crown sheet is not in the shape it originally was.

Perhaps you are familiar with giving engines the cold water test but I shall describe the work briefly, so if you are not familiar with it you will know how to proceed.

Get a small hand force pump and connect it to your boiler at any convenient point, making sure that all joints are perfectly tight. Then fill the boiler with water, open the pop valve and pump until water flows therefrom. This will insure that no air is trapped in the top of the dome. Be sure to have an accurate steam

gauge on the boiler before beginning the test. Start pumping and watch the gauge. If it goes gradually up to, say one hundred pounds, and then falls suddenly, it is evident that some brace or stay has given way but if on the contrary, it registers right on up the scale without showing any such peculiarity, it is taken as evidence that up to the given pressure the boiler is all right. The age of the boiler, its history and general construction will guide the experienced man as to how much steam pressure the boiler ought to carry. To prove this case of judgment, it is customary to test the boiler with cold water pressure to fifty per cent more than the steam pressure the boiler is supposed to carry. If the boiler stands this test, it is supposed to be all right for the steam pressure decided upon. After all, the test resolves itself into a test of the inspector's judgment. There is absolutely no way to figure out how much an old boiler will safely carry.

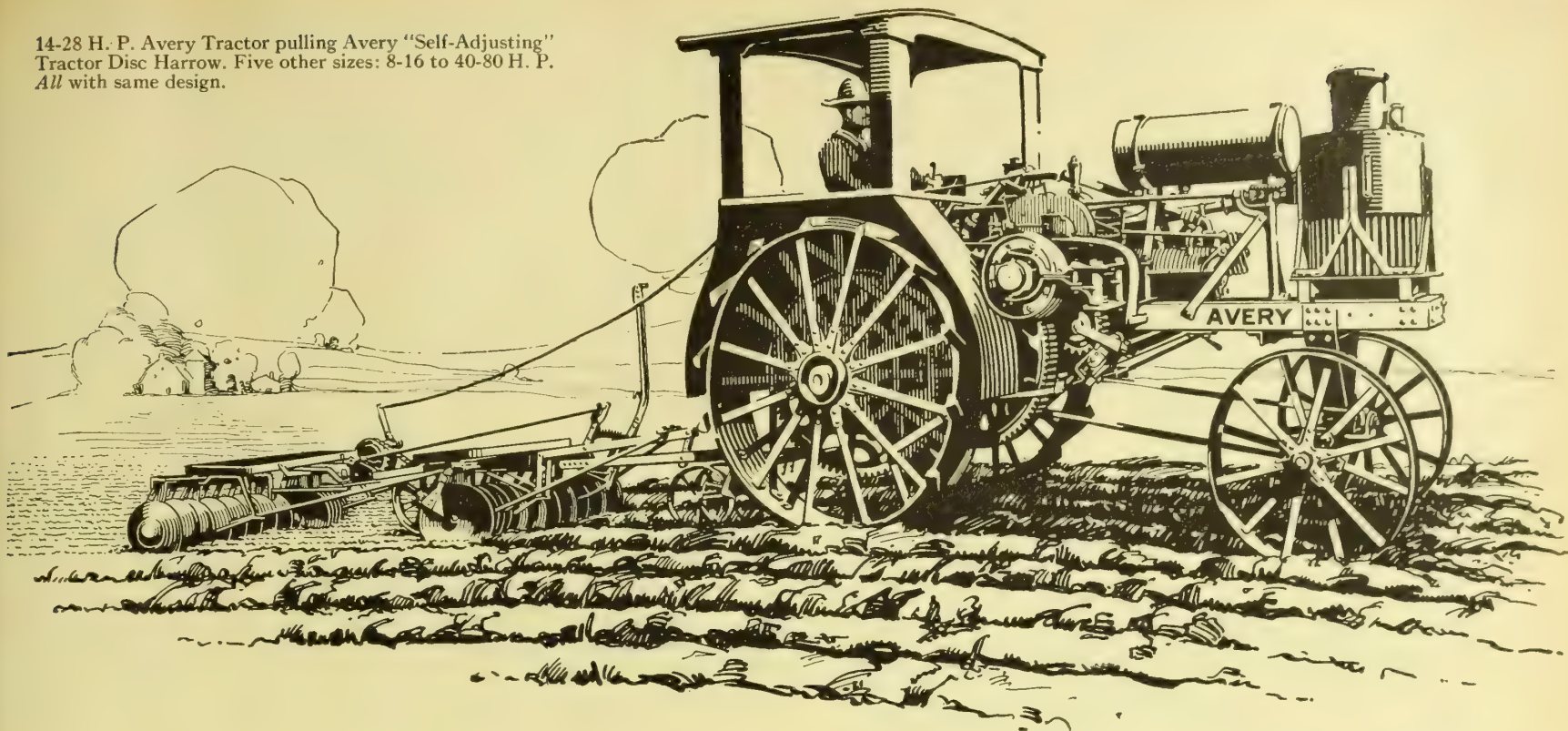
Another way to make a test, if a force pump is not at hand, is to fill the boiler entirely full of water, even up into the dome. Then start a fire in the fire box and put pressure on the boiler by the expansion of the water.

Question of C. E. I have a 1 1/4 horse power gasoline engine that I have been

trying to fit with cylinder head gasket. I have not been able to make a gasket hold. I have tried almost every kind of asbestos packing, but none will stay put. The gasket that was put in at the factory was a piece of ordinary asbestos packing.

Answer.—Ordinary asbestos packing will hold in your engine if it is carefully cut and properly put in. It is possible to put asbestos paper packing in a place of this sort and make it hold, but as the asbestos paper is made from short fibers of asbestos, it is much better to get a packing made from the longer fibers. You can get asbestos packing in which fine copper wires have been woven in with the fiber and this together with the fact that the fibre is long, makes this packing very tough. The gasket should be cut on a smooth metal surface with a sharp cold chisel, and great care should be taken in tightening up the bolts when the gasket is put in place. Tighten the bolts a little at a time, one after another, until all of them are as tight as you can draw them, then after the engine has run for a little while, go over them again and do this frequently until you are sure that the bolts are as tight as it is possible to draw them. You should have no trouble in installing the copper asbestos gasket, but by using care in tighten-

14-28 H. P. Avery Tractor pulling Avery "Self-Adjusting" Tractor Disc Harrow. Five other sizes: 8-16 to 40-80 H. P. All with same design.



Get Your Avery Now When You Need It Most

Fall time is indeed *tractor* time—the time when the advantages of power farming are many—the time when an Avery will mean most to you in getting your fall work done in the right way. With an Avery *now*, you can get your fall plowing, discing, harrowing and seeding all finished double quick—then have your own power for threshing, silo filling, shelling corn, grinding feed, road work and other power jobs.

You may have said, "Some day I will have an Avery." Why wait till "some-day" when having an Avery *right now* would mean so much to you in speeding up your work, getting it done in the right way, and insuring a big next year's crop?

A Size for Any Farm

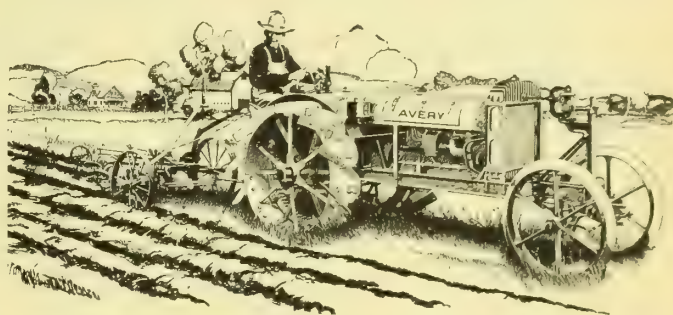
You can get an Avery in just the right size to fit your needs best. Also "Power-Lift" Moldboard or Disc Plows to fit any size Avery Tractor and "Self-Adjusting" Tractor Disc Harrows and "Power-Lift" Tractor Grain Drills. All these tools are operated from the tractor platform—real *one-man* outfits.

When you get an Avery you put speed and certainty into your farm work. Six sizes of Avery Tractors, from the 8-16 to 40-80 H. P., have the low speed, heavy-duty "**Draft-Horse**" Motor—the motor that gives years of service with minimum upkeep cost. Has Renewable Inner Cylinder Walls, Adjustable Crankshaft Boxes, Valves in Head, Centrifugal Gasifiers that burn *all* the kerosene, and many other exclusive features.

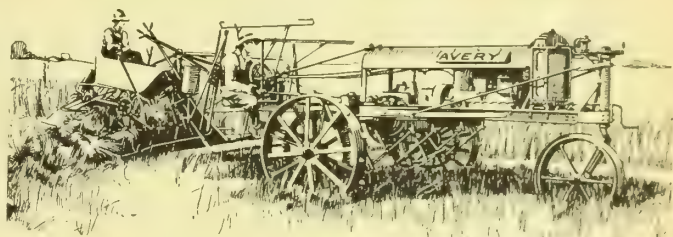
The power is delivered through the "**Direct-Drive**" Transmission with only three shafts and straight spur gears between the motor and the drawbar. Belt pulley is mounted *direct* on the crankshaft—gets all the power of the motor in the belt. That's why the Avery is the real puller in the belt and at the drawbar.

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Get your Avery now when you need its service most in getting a good crop started for next year. See your local Avery dealer or write us for catalog showing complete Avery line of Tractors, Tractor-Drawn or Tractor-Driven Machinery.



Avery Six-Cylinder Model "C". A small tractor making a big hit. The Avery 5-10 H. P. is similar to this model but smaller.



Avery Motor Cultivator Harvesting—one of the most useful power machines ever built for farm work. One and two row sizes.



Avery Separators are the Champion "Grain Savers." Hyatt Roller Bearing equipped.

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EVERY COMPANY, 334 Iowa St., Peoria, Ill.

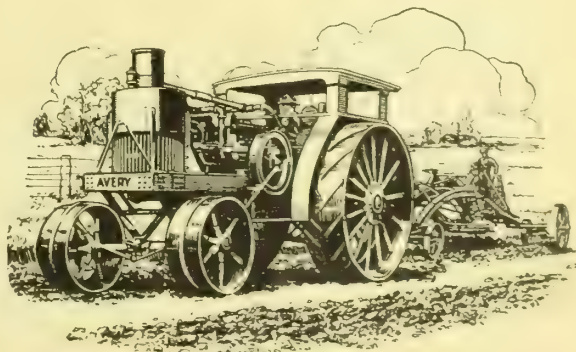
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Motor Farming, Threshing and Road Building Machinery



Avery 40-80 H. P. Special Road Tractor Built in five sizes—make better roads at less expense.

THE LEADING THRESHER MANUFACTURERS OF THE UNITED STATES AND CANADA USE -



HART BELT AND BUCKET WEIGHER
(CODE - DAPHNE)

One of 12 styles suitable for large separators.

A light weight, yet strong, compact steel feeder for small separators.



LANGDON IDEAL SELF FEEDER

THE BETTER FEEDER
Dependable because perfectly governed. For large size separators.

THE HART JR. LINE
comprises 5 different models, all especially designed for Junior Separators and adapted to territorial conditions and requirements.



**AS STANDARD EQUIPMENT
BE SURE YOUR SEPARATOR IS HART EQUIPPED**
OVER 30 DIFFERENT STYLES OF WEIGHERS AND SELF-FEEDERS FOR LARGE AND SMALL SEPARATORS
1920 CATALOGS READY
HART GRAIN WEIGHER CO.
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GRAIN HANDLING MACHINERY SINCE 1889



LANGDON JR. SELF FEEDER



HART JR. WEIGHER
(CODE - HARSING)

Mention The American Thresherman and Farm Power

ing the bolts and in cutting the gasket you should be able to make a plain asbestos paper gasket hold. You must, of course, be sure that all foreign matter is scraped and polished from the metal surfaces touching both sides of the gasket.

Question of S. B. I carry one hundred and twenty-five pounds of steam in my 16-horse power boiler. Starting with steam fully up, three quarters of an hour of threshing will run pressure down until I have to stop and get up steam. The working parts of the engine seem to be in good condition. The boiler leaks just a little around one bracket, but it is on the outside. I can have such a hot fire that it will melt down the grate, and still I cannot keep up steam. The engine steams easily standing still, but as soon as one starts to thresh, the steam gets away somewhere, and I cannot find where it goes.

Answer.—It is very difficult to answer your question with any certainty, because any one or more of several causes might make the boiler steam badly. There are two things to consider in such a case, the apparatus that makes the steam and the apparatus that uses it. If either one is in bad adjustment, you will have trouble with the steam. Taking up first, the generation of the steam,

two things may be wrong. The heating surface may be ineffective or else the fuel may not burn properly. In the first case this may be due to scale in the boiler, either on the crown sheet or on the tubes or too much soot inside of the tubes. In the second case the exhaust nozzle may not point up the center of the stack or it may not be the right size for the fuel used, thus making a poor draft. There may be a leak of air into the fire box above the fire or at the front end of the boiler or at the base of the stack. This would act the same as a check draft in a stove pipe and prevent proper draft. Again, the grates may not have the correct air space for the fuel used, thus causing poor combustion.

If the boiler generates enough steam, it may be partly lost before it is turned into power in any one of a number of ways. The piston may leak, the valve may leak or steam may blow into the air through a broken gasket or from some of the valve stuffing boxes. It may be that the valve is not correctly set thus allowing a waste of steam. If the valve or valve seat is cut or grooved so that steam can blow through to the exhaust side, the engine will take too much steam. If the piston rings are worn and do not fit tight, steam will blow through. If the piston or cylinder is cut or grooved, steam will be lost.

Question of E. S. Is it all right to take dynamite out of the paper cartridge and load it loose?

Answer.—This is a very bad practice. The same result is accomplished by slitting the cartridges three or four times from end to end. Dynamite should be loaded with the stick intact in wet holes.

Question of R. B. The engine in my car will not run even and smooth when idling or in gear. The manifold will get red hot some of the time. I have had the manifold off, but it seems to be in good condition. The car has been in several repair garages but none of the mechanics have done it any good.

Answer.—There are several things that might be responsible for your exhaust manifold getting so hot. One of the common things which will cause this is giving the car too rich a fuel mixture. A fuel mixture that is very rich burns slower than one that is not so rich, and sometimes the gas will still be burning when it passes out through the exhaust valve. This condition is, of course, very hard on the exhaust valve, and probably when you next examine your exhaust valves, you will find that they have suffered considerably. The same results may be obtained if the valves are out of time, allowing the exhaust

gases to begin to escape before the fuel charge is entirely burned. If the spark is very late, the same thing is true, so the trouble might be in the ignition timing. If for some reason there is an insufficient lift of the exhaust valve or a choked muffler, you may have the same sort of trouble.

Question of M. A. H. Which is the right hand side and which the left hand side of a threshing machine, a straight flue engine and an automobile.

Answer.—It is a safe rule to follow on almost any machine that you can determine which is the right hand side and which is the left hand side from which is right and left to you from operating position. For instance, in a motor car when you are sitting at the wheel, the right hand side of the car is to your right hand and the left hand side to your left. In the case of a steam traction engine when you are standing on the platform in proper position to guide the machine, the right hand of the engine will be to your right hand. I am not so positive about the threshing machine separator, but I think the right hand side is the cylinder pulley side; the side which is to your right hand as you face the machine from the front. I know that some manufacturers of separators say that the right hand of their separator is the pulley side.



Built Up to Old
Reliable Stand-
ards—Not Down
to meet a price.

Reliable 45 Years

Reliability is everything. Any Tractor that you depend on to pull your plows, furnish belt, power, and take the place of horses and men must first of all be Reliable.

All-around-Reliable for any power job, fixed or moving. Reliable for night or day service all the year. Reliable for the farm boy as well as the expert. That's the Russell.

First made Reliable in 1875 and then kept Reliable by constant improvement ever since. Built with hand-made quality of workmanship. Made up of only true and tried features—not a single experiment in the whole job. Strong and sturdy, good for many years of hard service.

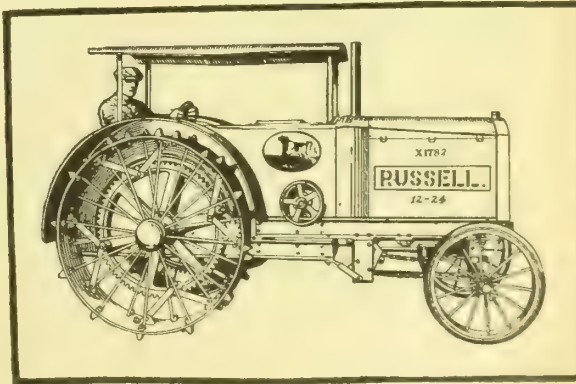
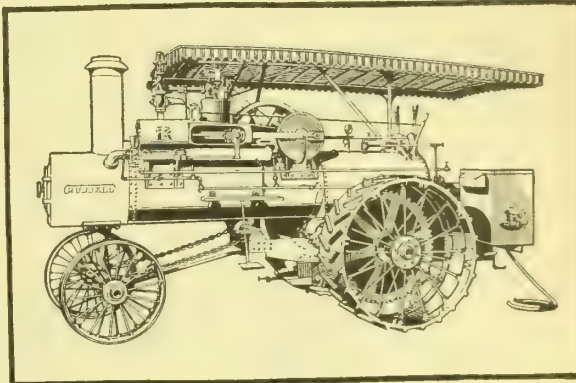
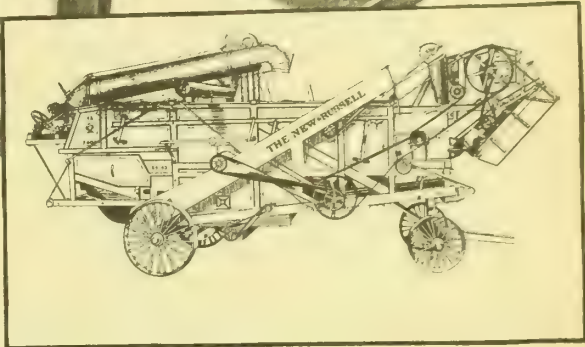
Get an Old Reliable Russell and be satisfied.

Russell Kerosene Tractors—4 sizes, 4 cylinders,
4 wheels. Russell Steam Tractors in 5 sizes.
Russell Threshers in 6 sizes. *Send for Catalog.*

The Russell & Company Massillon, O.

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THE OLD RELIABLE LINE

"NORMA"

PRECISION

BALL BEARINGS

(PATENTED)



Quality seeks quality. Which explains why "NORMA" Bearings are standard in all magnetos and lighting generators of the better class—and also why "NORMA" equipped magnetos and lighting generators are standard equipment on all cars, trucks, tractors and power boats built to a quality standard and sold on a quality basis.

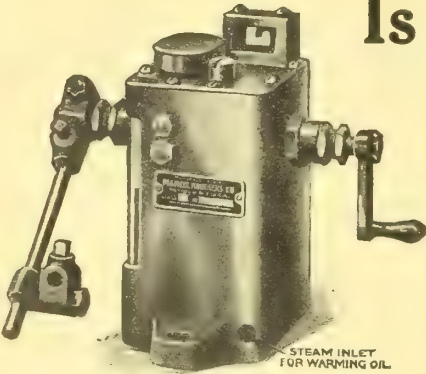
See that your Electrical Apparatus is "NORMA" Equipped.

THE NORMA COMPANY OF AMERICA
Anable Ave., Long Island City, New York
Ball, Roller, Thrust and Combination Bearings

Mention The American Thresherman and Farm Power

An Oil Pump That

Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H.P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.
311-313 Babcock Street Buffalo, N. Y.

Women's Department

Unchanging

I chanced one day to meet a man who never changed his mind. He held to one idea, which he never left behind. He called his friends together and he blandly said to them, "Consistency's a jewel; and in me you see a gem."

I saw another man who wore a coat all patched and frayed. Both funerals and weddings he attended thus arrayed. He readily explained a course that puzzled me a lot: "I like the coat; and anyhow, it's all the coat I've got."

I praised his great economy, so touched by sentiment. He clung to that old rusty coat, no matter where he went. And yet to both of them I say, "You should have something new; One coat or one idea cannot last a whole life through."—*Washington Star.*

When the Cans Are All Full

J. S. G.

It has always "hurt" me to see anything go to waste; but since the war and the acute realization that came then that a shortage of food is actually possible, in this old world, in fact, that there are at this moment many countries where such a shortage exists, I just can't see good material spoiling for lack of preservation. But with all my thrift, there comes a time when the containers for canning things are all full!

In such an emergency I have experimented with some old and some new methods of salting, drying and storing vegetables. Government Bulletins, which may be had for the asking, from Washington, have been a great help and given me a confidence that my efforts would be rewarded by good results. I have found that string beans, beets, tomatoes, cabbage, cauliflower and cucumbers will keep well when packed in alternate layers of dry salt, in earthenware crocks or wooden kegs, provided enough brine is added, two days after they are packed, to cover them completely.

Now there are "brines" and "brines." Brines weaker than ten per cent are likely to allow the vegetable to ferment; though the strength of the brine should be governed by the character of the vegetable to be preserved. A "watery" vegetable naturally needs a stronger brine than does one containing less water. For making brines of varying strength, the Government Bulletin gives the following table:

Water (gallons)	Salt (approximate weight in ounces)	Salt (approximate measure)	Brine (percentage)
1	1 1/4	3 table-spoons	1
1	2 1/2	6 1/4 table-spoons	2
1	3 3/4	1 1/2 cup	3
1	5	2 1/4 cup	4
1	6 1/2	1 cup	5
1	12 1/2	1 1/4 cup	10
1	19 1/4	2 1/4 cup	15
1	32	4 1/2 cup	25

One word of caution. Don't try to preserve vegetables unless they are gathered when in prime condition.

They should then be washed thoroughly, peeled or trimmed if necessary, and packed while crisp and tender. After the layers are all packed, cover the top of the vegetable with a thick layer of grape, horse-radish, or Swiss chard leaves. After the brine is added and all bubbles have ceased rising (which may be a week after packing) enough melted paraffin or cotton-seed oil may be poured over the top to make an air-tight seal and thus prevent mould or evaporation of the brine. Store in a cool place and examine frequently for several weeks.

If the following directions are carefully followed, you will be sure of good results:

CUCUMBERS.

Cucumbers, one or two inches long, known as gherkins, make excellent sweet pickles. Those three to five inches in length may be pickled as soon as gathered, or they may be put down in brine until more time is available. Use a sharp knife for harvesting and leave a short stem attached to each fruit.

To pack cucumbers in brine, place a layer of them in the bottom of an earthenware jar and cover them with a layer of salt (ten parts cucumbers to one part salt by weight). Continue with alternate layers of cucumbers and salt until all the cucumbers are used. Cover the top with well-washed grape or horse-radish leaves to prevent the upper layer from moulding. Place a large china plate or earthenware cover on the top and weight it with a clean, heavy stone. After about two days, add sufficient ten per cent brine to cover the cucumbers completely. Remove the plate and the leaves, and add other layers of cucumbers and salt as the crop is harvested from day to day.

Another method of preserving cucumbers is to use six parts of water, one part salt, and one part cider vinegar. Pack the cucumbers securely in a jar, cover them with the solution, and place horse-radish or grape leaves on the top. Weight the cucumbers with a large stone or an inverted plate.

BEETS.

Medium-sized, smooth beets will be the best. Wash them and pack firmly in an earthenware crock. Cover with a ten per cent solution of salt, in which one-twentieth of the water has been replaced by vinegar (about three-quarters cup of vinegar to one gallon of water). Weight the beets down and store the crock in the cellar.

PEPPERS.

Select medium large, plump, green peppers. Remove the stems and enough of the tops so that the seeds can be taken out, pack the peppers

in an earthenware jar, and cover them with a ten per cent brine. Cover the top with a layer of swiss chard or grape leaves, and weight the peppers down.

A salt and vinegar solution (ten per cent brine in which one-twentieth of the water is replaced with cider vinegar, or about three-fourths cup vinegar to one gallon water) may be used in place of ten per cent brine for preserving peppers. Peppers preserved in this solution, though of practically the same quality, are more palatable than those held in straight salt brine.

CAULIFLOWER.

Select firm tender heads of cauliflower and separate each into parts or branches. Wash and pack the cauliflower firmly in an earthenware jar, and cover it with a ten per cent solution of salt in which one-twentieth of the water is replaced by cider vinegar (about three-fourths cup vinegar to one gallon water). Cover the top with a layer of chard leaves and weight the contents under the solution.

GREEN TOMATOES.

Choose well-developed green tomatoes, wash them, pack them in a container, cover them with a ten per cent brine, place a layer of chard leaves on the top, and weight the tomatoes down under the brine.

Green tomatoes similarly prepared and packed in salt and vinegar solution the same as that used for peppers are good for salads and relishes.

RIPE TOMATOES.

Select medium-sized ripe tomatoes free from cracks or bruises. Pack them similarly and in the same kind of solutions as recommended for green tomatoes.

Teach Your Child Self-Reliance

BY MRS. RUTH HEPPNER SWAINE.

The child is a primitive little being. His desires are near the surface, and primarily very selfish. He wants all things for his own. He must also be first in everything, and, if he is the biggest force in the play group, what more natural than that he should try to make everything conform to his wishes? But this child, if once actuated by the right, becomes the most generous, the most considerate and the gentlest of little fellows. A few words, a firm but kind insistence on your part, and he knows the pleasure of giving up for others.

All children have their difficulties with one another, and sometimes, if one judges by the noise in the backyard, they are very big ones.

A moment's wait will usually show whether it is wise to run and help the children readjust their little world. Do this only when necessary. Hold your breath behind the door, and see if happily they are not righting the situation themselves. Even the physical hurts need much less sympathy

than the average mother is apt to bestow. Would we coddle our children into becoming physical cowards? From earliest babyhood, begin to turn their attention when hurt to some new interest, and observe how quickly the pain is forgotten.

A strong conviction has grown out of the passing years of my motherhood that the greatest service a mother can do her child is to teach him self-reliance. If you begin with the baby, the habit forms easily and before you know it self-reliance has really become a habit with him. Hold yourself free from fear as he tries out his growing powers. Watch alertly but wait. Let him try the reach that may topple him over, but secure for him the bright ball. Let him make all the moves he wants to, and if necessary, be there to catch him as he falls. Hesitate long before you turn a child deliberately away from the thing he has set his heart on doing. Strong initiative is too glorious a characteristic to nip in the bud. Try for one day to stop and think before you deprive your child of the pleasure of simple achievement.

There are countless little tasks a child can do for himself to help mother. Each mother will think of many of these in the course of a day. Remember that in the child's world of new impressions the most trite acts to us are, to him, the most delightful of plays.

Play is the vital employment of childhood. The art of playing alone, being friends with himself, is a foundation for self-reliance in greater things later in life. A child cannot be more than contented. So hesitate, dear mother, to interfere when your child is quietly employing himself in his own chosen way, even if it is only baby with his toes. Let the spell last as long as it will; the next will last longer. Soon your child of three will play hours by himself. The busy mother often needs this respite.

A New Dish From An Old Ingredient

Sour milk as an antidote for old age is not a new ideal. Tribes of the Eastern desert which are unable to keep milk sweet for any length of time are said to retain their youthful appearance longer than others and to attain great age because their diet consists largely of sour milk. And certain notable beauties who have kept their age astonishingly have credited it to sour milk treatment. But sour milk is not palatable to most persons, although lopped milk with sweetened cream is eaten by certain folk with an appetite cultivated to it. The Iowa State Agricultural Experiment Station has brought out a form of sour milk that is said to have all the advantages of sour milk and at the same time to be as tasty as ice cream or sherbet. Out of one hundred and seventy-nine



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The elements of crude oil are so completely blended that it is as difficult to separate them as to separate the blended colors of the rainbow. To get complete separation through repeated distillations we make countless tests. Only in this way can the absolute purity of all products be insured.





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The secret of successful scientific oil refining is painstaking care and unceasing vigilance. In making EN-AR-CO oils we average over a million tests a year. It is only by this multiplying of tests that perfect products can be made. This thoroughness in our scientific refining processes is the protection we offer to users of our products.

En-ar-co Oil Saves Motor, Saves Costs, Saves Troubles

Good motor oil, pure motor oil, is just as essential to your engine as good, pure water is to your body.

Just as impure water will injure your body, so do impure, imperfectly refined oils ruin your motor, whether it be auto, truck or tractor.

EN-AR-CO oils will keep your motor healthy, always responsive and free of troubles. They will save you repair costs, and will free your motor of the engine troubles that are so common where poor oils are used.

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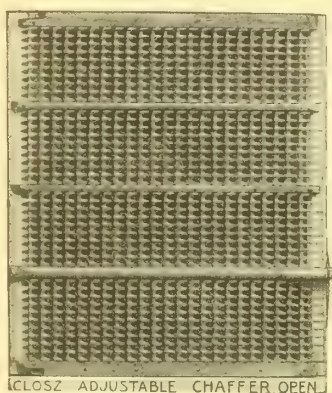
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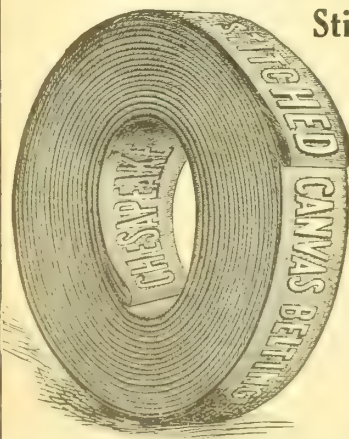
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persons who sampled it at the station, one hundred and eleven preferred the lacto to vanilla ice cream and nine others considered it equal to ice cream. Out of the same number one hundred and twenty-three persons liked the lacto better than sherbet. The new product, known as lacto, is made of loppered milk with the addition of eggs, sugar, lemons and any fruit flavor, and it is frozen exactly like ice cream. It contains as much nutriment as ice cream, has less fat and more acid. In a bulletin on the subject issued by the Experiment Station the following rule for family manufacture of lacto is given:

"Take a bottle of good fresh milk, which has not been heated, set it away at a temperature of from sixty-eight to seventy degrees Fahrenheit. until it coagulates. If it coagulates as a smooth, solid curd, without pin holes, if the aroma is clean and pleasant and the flavor nice and creamy, it can be used as a starter for a larger amount of pasturized whole or skimmed milk.

"The milk when ready to be used for lacto has an acidity of seven-tenths to eight-tenths of one per cent expressed in terms of lactic acid. It must be of a mild clean acid flavor. The curd must be thoroughly broken up. This is accomplished by pouring it from one pail to another until it is as smooth and velvety as rich cream. From this milk, which in this connection we will call 'lacto milk,' the various lactos are prepared." Once prepared, the lacto is used as a foundation for various fruit creams, in much the same way that ordinary creamy milk is used.

Tried and Found True

(The Editor of the Women's Department has tried all the recipes printed below, in her own kitchen, and found them "true.")

NUT BREAD.

Sift three cups of white flour with three level teaspoons of baking powder; one teaspoon of salt; one half cup of sugar; beat one egg light and to it add one cup of milk. To the sifted flour add one cup chopped nut meats, then pour in the egg and milk and mix thoroughly. Place in a greased baking pan, let stand ten minutes and bake in a moderate oven forty minutes.

SPICE CAKE.

One egg, two-thirds cup molasses, two-thirds cup sugar, two-thirds cup melted fat, one tablespoon vinegar, one cup milk (or coffee), two and two-thirds cups flour, one teaspoon soda, one teaspoon baking powder, spices to taste.

Nut meats and raisins may be added and make a much more delicious cake. The flavor may also be varied by omitting the spices and adding one-half teaspoonful of ginger

and one teaspoonful of lemon extract. This cake will keep for weeks, improving with age.

SOUR-MILK DOUGHNUTS.

Two cups of flour, three-fourths teaspoon salt, one scant teaspoon soda, one scant teaspoon cream tartar, one egg, one-half cup sugar, one-half cup sour milk. Fry in deep fat.

APPLES AND PUFFED RICE.

Cooking sufficient puffed rice to fill a ring mold; pour the rice in while hot, and fill the center with apples cooked tender and well sweetened; flavor as desired. Let this cool, but do not have too cold, then heap with whipped cream and serve.

APPLE COBBLER.

Make a batter of half a cup of sugar, a heaping tablespoon of butter, one beaten egg, one cup of milk, flour to make a little stiffer than pancakes, and two level teaspoons of baking powder. Beat this until smooth, then stir in three or four apples pared, cut in thin slices, and floured. Bake in a loaf, and serve either with a pudding sauce or with cream and sugar.

MARLBOROUGH TART.

To one large cup of stewed and sifted apples add one cup of sugar, two beaten eggs, three tablespoons of cream, half a cup cracker crumbs, a tablespoon of butter, and half a teaspoon of orange extract. Mix well together and bake with one crust. Spices may be added, but the tart is more delicate without them.

BIRD'S NEST PUDDING.

Pare and core several tart apples, scald them with half a cup of sugar and a little water. Place them in a deep flat dish. Beat well together two eggs, a cup and one-half of sugar, one tablespoon butter, four cups milk, two cups flour and a heaping teaspoon baking powder. Pour the batter over the apples and bake. Serve warm with a sweet sauce.

POTATO PIE.

One pint mashed potatoes, one cup butter or half a cup if cream is used, three eggs, one and one-half cups sugar, one cup of milk or cream, flavor with lemon and bake in an under crust.

IRISH POTATO CAKE.

Three-fourths of a cup of butter, two cups of granulated sugar, five eggs beaten separately, one-half cup of cold water, two squares of chocolate melted, two teaspoons of baking powder, two cups of flour, one cup of mashed potatoes, one teaspoon each of cinnamon and nutmeg, one teaspoon of vanilla. Cream the butter and slowly add the sugar; add the egg yolks and the melted chocolate. Mix well and add the potatoes and spices. Sift the flour three times and add it with the baking powder and water. Lastly add the vanilla and stiffly beaten whites of the eggs. Bake in three layers. Put together with white icing and cover with same.



An E-B Plowing Outfit Breaks Acre of Sod An Hour

Twelve years of building tractors and watching them perform has taught us to make conservative claims. We well know that demonstration performance is not always equaled by the farmer when he first begins to farm with power. Most users of E-B plowing outfits, however, find it easy to turn better than 10 acres a day.

As an illustration—recently we asked permission to plow—at cost—on a brushy, cut-up farm in Northern Minnesota. The owner agreed but nevertheless said: “You can’t use a tractor on my place. Why, man, the biggest field is only 15 acres!”

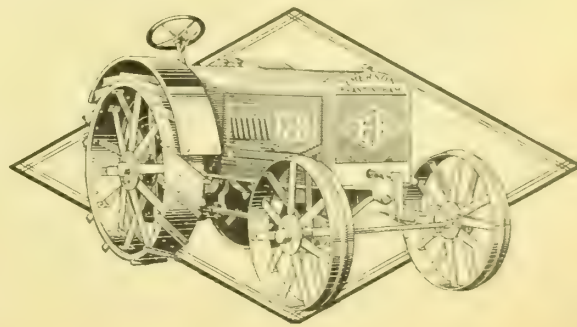
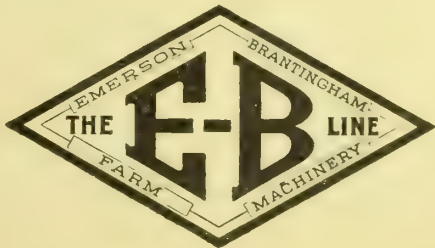
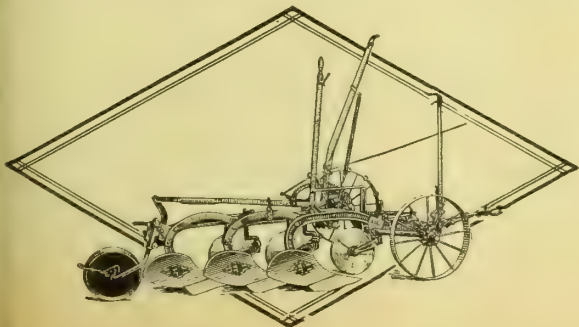
We put a tractor in there, plowed an acre of sod an hour, and had no trouble. The cost—including the pay of operator, fuel, oil, interest and depreciation—was 44% *less* than horse-plowing cost the farmers of that county. You can do it too

Emerson-Brantingham Implement Co., Inc.

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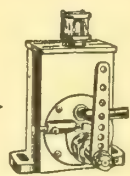
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It has no ratchet wheel or pawls, and does not feed the oil by "spurts," but a certain amount of oil is fed with every revolution of the engine. Take out your watch—count the drops—set it to feed any number of drops per minute—the pump obeys your instructions.

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Uncle Silas

SILE'S for the best man politically, religiously or in the business world, regardless of his faith, party affiliations or previous condition, just so he's a man right up to the measurements of the Bertillon system.

IN going about with thy wing down, looking for a comely damsel upon whom to bestow thine affections, take them in singles from the sixteen yard rise, and not in doubles or thy stalking will bring thee naught. Forget not this gospel, that though a woman be as honest as a child, yet will she lie to the man she loveth, and pretend that she loveth him not.

MAN born of woman is of a few days and full of prunes. He talketh about that concerning which he knoweth the least and generally gets by with it. Behold the fakir, and him that weareth a broad-brimmed hat and long hair, and who spiebeth forth in a monologue about the healing qualities of patent medicines, concerning which he knoweth less than the man who concocted the potion, or the gullible simp who forks over a dollar for three cents' worth of physic. Every living creature hath its parasites and the human parasite is the biggest fakir of them all.

DO as I tell you to do and not as I do or as I may have done. I've told you heretofore how I had "hooked watermelons" 'way back in the sixties, but I don't want you to "hook watermelons." It's a dangerous and wrongful act. In the first place, it's wrong to hook anything and then, in the last place, well, you might get hit with a shot in the last place as you are going over the fence. When I hooked watermelons they were worth only ten cents each or three for a quarter, while to steal a watermelon now would be grand larceny, and men who raise them these days are grasping enough to guard them with bulldogs and use "forty-fives" instead of bird-shot, which might bore a tunnel through the place where the juice is distilled. Leave the watermelon patches alone. Do you hear me?

IN digging down among the relics of antiquity one day I came across this writing which was in the English language, translated by some Tartar who knew whereof he wrote, and the interpretation thereof was thusly: "Now there were four women by the river Tigris, and to each of them I loaned fifty shekels. And the first damsel said unto herself, 'Lo, I will not repay him, for he is richer than I; he can afford it,' and she paid me not. And the second damsel said, 'Lo, said he not that he was in no hurry? Sometime I will repay, but not now.' And she made no mention of the debt, neither did she ever pay me. And the third damsel suffered much, for she was in hard luck, and she lamented much, but she never dug. But the fourth damsel paid me in full measure on the next Saturday and discharged her debt. Verily, there are others."

WE'RE an ignorant crowd in many things, even those of us who have tried to inform ourselves concerning ancient history, as well as modern history. I have heard so many claims and contradictions by the wise men of our day, concerning scripture, the Holy Bible, the Koran, and even concerning the writings of Flavius Josephus, that I sometimes wonder how these things could all be true. I have heard it said that the Koran and Mohammedanism denied the divinity of Christ but I have a copy of the Koran before me, on page eighty-nine of which is the history of Zacharias, and it tells of the birth of John, the fore-runner. It contains an account of the Angel of the Lord having said to Zacharias: "O Mary, verily God sendeth thee good tidings, that thou shalt bear the word proceeding from Himself; his name shall be called Christ Jesus, the Son of Mary."

Then it has been said that in all his writings Flavius Josephus refused to mention the name of Christ, yet on page five hundred and forty-eight of the works of Josephus I find these words, written by himself: "Now there was about this time Jesus, a wise man, if it be lawful to call him a man, for he was a doer of wonderful works—a teacher of such men as receive the truth with pleasure. He drew over to him many of the Jews and many of the Gentiles. He was (the) Christ and when Pilate, at the suggestion of the principal men among us, had condemned Him to the cross, those who had loved him at the first did not forsake him, for He appeared to them alive again the third day, as the divine prophets had foretold, these and ten thousand other wonderful things concerning him, and the tribe of Christians, so named from Him, are not extinct at this day."

Verily, men are not so far apart in their religious views or in anything else, if they are only willing to concede the truth concerning all things, whether for or against us, as we hope that others will receive the same from us. Both Mohammed and Josephus frankly acknowledge Jesus as at least a wonderful man and a prophet sent from God.



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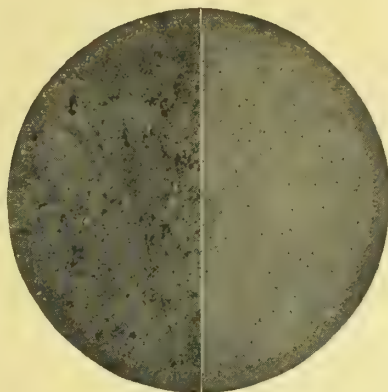
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THE WORLD'S
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PISTONS, MOTORS, GASOLINE, AND OIL

Used oil as seen through the microscope. Note the grit and punctures in the film.



Fresh oil as seen through the microscope. Note the smooth unpunctured film.

Madison
Kipp

The efficiency of truck and tractor motors is materially increased by providing the pistons with fresh oil lubrication, instead of attempting to use the same oil again and again, as the ordinary lubricating system does.

The following results are typical for a well known four-cylinder motor, running at 1000 r. p. m.:

Maximum horse power—When the motor was entirely equipped with a system using oil again and again its maximum horse power was 29.3. When the pistons were lubricated with fresh oil from a Madison-Kipp system the maximum horse power was 33.3—a gain of over 17%.

Fuel consumption—When fresh oil for the pistons replaced used oil, a saving of 13% in fuel consumption was shown.

Fuel condensation—When the used oil method of lubricating the pistons was employed, 4.87 pints of gasoline went into the crank case in a set number of hours. When fresh oil from a Madison-Kipp System was pumped to the pistons, the oil-seal between pistons and cylinders was so much better that only

1.7 pints of gasoline reached the crank case. Fuel condensation was therefore reduced by over 65%.

The greater maximum horse power, lower fuel consumption and reduced fuel condensation, shown by Madison-Kipp lubrication for the pistons, are all largely due to the better oil-seal provided by fresh oil.

When the entire motor is lubricated with the Madison-Kipp System, the results are even more impressive.

Oil saving, in some instances, runs as high as 83%.

Similar results have for years been demonstrated in the field by kerosene and gasoline-burning motors on many thousands of tractors.

Since Madison-Kipp Fresh Oil Systems are actually a part of the tractors they serve, the only way in which the tractor user can secure the savings and freedom from trouble that they provide, is to buy the product of manufacturers who send out their tractors Kipp-Equipt.

These tractors cost no more and are worth much more.

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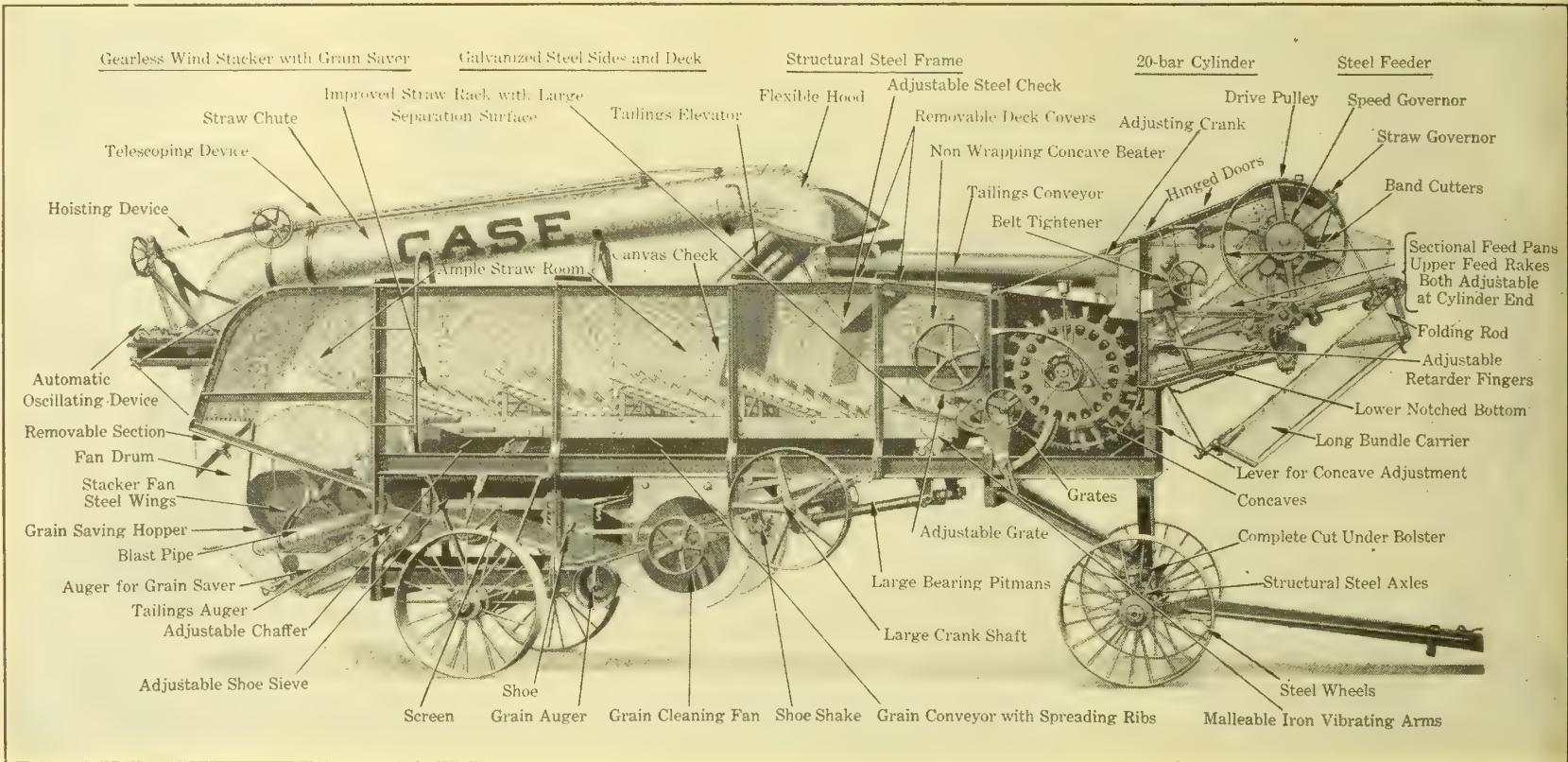


Figure 1

Figure 1 illustrates a sectional view of a typical 20-bar cylinder type of Case thresher with feeder and wind stacker. We build this type in three sizes, as follows: Case 32x54, 36x58, and 40x62. Note the large cylinder, 20,000 for big threshing and separating capacity as well as uniform motion. All sizes of Case threshers are steel constructed which prevents total destruction by fire, guards against rotting and warping and insures long years of dependable service. With proper adjustments, and attachments which we can furnish, Case machines will thresh, separate, clean and save every kind of grain or seed grown. The new Case Feeder, of improved design, is shown as it appears on our larger machines.



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To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

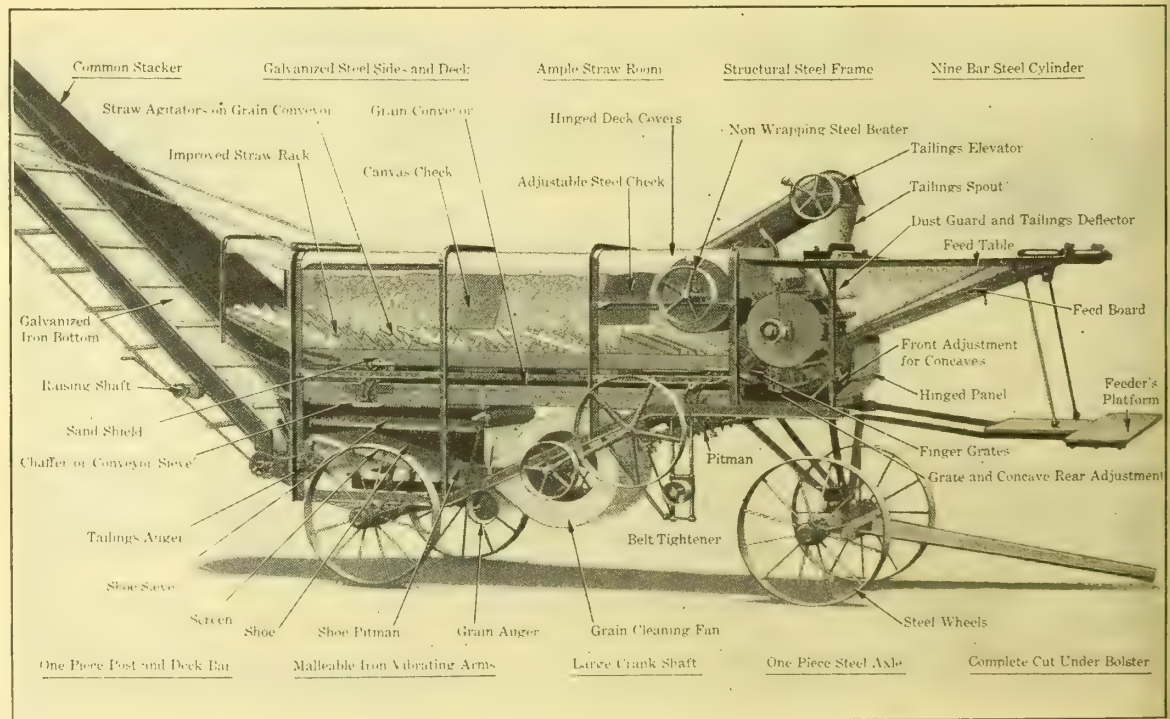


Figure 2

Figure 2 shows the sectional view of Case 9-bar cylinder thresher. The Case 9-bar machine is built in the 20x28 size only. This thresher is intended chiefly for individual threshing and requires from 16 to 18 H. P. to operate with feeder and wind stacker. To avoid needless weight and to add strength, we use numerous pressed steel and forged parts in place of castings. Note the extreme simplicity and the all steel construction.

Best to Own or Employ

THE three illustrations on these pages show sectional views of the Case Thresher—Galvanized Steel-built—in 9-bar cylinder, 12-bar cylinder and 20-bar cylinder types. These views are presented to enable you to study the working parts, note the simplicity of design, and especially the peculiar fitness of each type for a certain class of service, as regards power requirement and capacity.

Thus, you will note that the features essential to clean threshing, thorough separation, perfect cleaning and unequaled saving are found in all three types of Case Threshers. The differences in general design are those pertaining to differences in capacity and power required for operation.

For instance,
Thresher show
thresher we
by the farm
ing. Light
storage,

Cas
show

of light weight and light running qualities, also have sufficient capacity to make them ideal for community or light custom threshing as well as individual work.

Case Threshers of the 20-bar cylinder type shown in Figure 1 are recommended where great capacity with economy are essential. The great 40x62 Case Galvanized Steel-built Thresher is of this type and is the largest thresher we build.

The steel construction of Case Threshers means rigidity and long life. It prevents total destruction by fire. It guards against distorted frames and disalignment of shafts and bearings from the weight and pull of main drive belts. Rotting and warping of frame, and other parts are avoided and the ~~the~~ ^{the} rusting of Case Threshers. ~~these~~ ^{these} are dis-

Wind Stacker with
Straw

Telescoping T
Hoisting Device



Oscillating
Device

Removal
Section

Fat

St

Brain

A

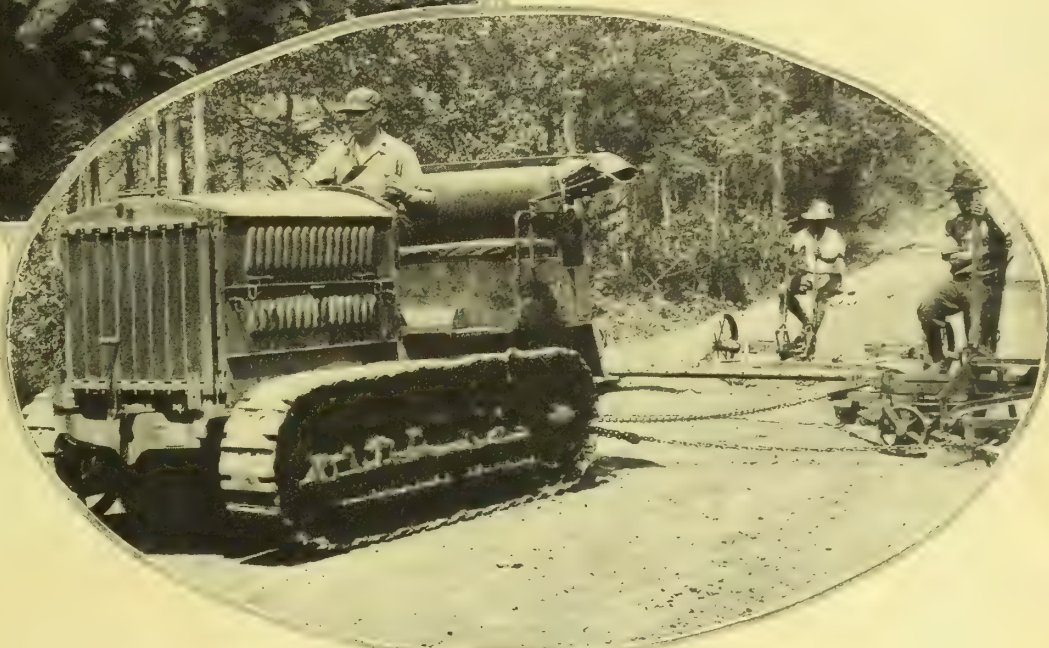
CATERPILLAR

REG. U. S. PAT. OFF.



The 5-Ton leaves deep, even furrows in the stiffest soil.

TRACTORS



The 5-Ton drags 30 miles of road per day.

FROM the earliest models built over a dozen years ago, to the latest 5 and 10-Ton sizes, "Caterpillar" Tractors have been the *standard of excellence* for tractor performance in power farming and road work the world over.

There is no substantial difference in principle between the "Caterpillar" Tractors built by HOLT a dozen years ago and those of today. In agriculture, in industry, and in war, years of hard service have brought refinement in design, but the performance of the present "Caterpillar" is the result of the continuous development of an originally sound principle.

The "Caterpillar" fits in with every farm power job, belt or traction, in the field or on the road. Its speed, power, and short-turning mean *extra capacity* for dragging, leveling and grading. As a farm investment it returns its cost in added service and satisfaction.

Ask any Holt dealer, or write us, for a copy of our new booklet "Caterpillar" Tractor Performance.

There is but one "Caterpillar"—Holt builds it.

THE Holt Manufacturing Company INC.

PEORIA, ILL. STOCKTON, CAL. CATERPILLAR New York, N.Y. Spokane, Wash.

The Servant in the House

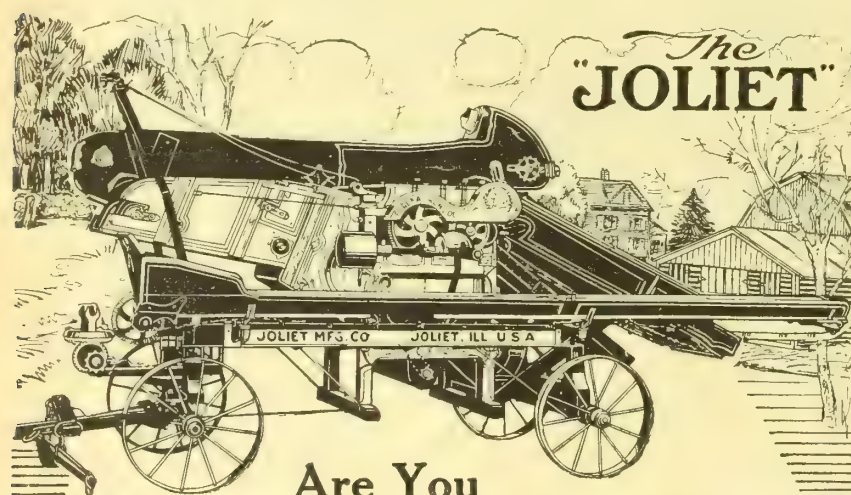



THE MYERS SELF-OILING ELECTRIC HOUSE PUMP is a reliable servant, guaranteed by MYERS to give satisfaction in any home. Here is the latest type of MYERS "Honor-Bilt" Pumps, for city, suburban and country residences. It is a remarkably compact, well built pump, neat of design and nicely finished—for safety, efficiency and economy it has but few equals. Operation by any electric current, automatically controlled, self-oiling, covered working parts and other features insure perfect water service for home or farm. Ask your dealer or write us. Attractive Catalog on request.

F.E. MYERS & BRO.
Manufacturers of MYERS "HONOR-BILT" HAND and POWER PUMPS for EVERY PURPOSE
HAY UNLOADING TOOLS - DOOR HANGERS ETC - ETC - ETC

ASHLAND = OHIO
ASHLAND PUMP AND HAY TOOL WORKS

Mention The American Thresherman and Farm Power



Are You Over-Looking This Money Maker?

Over 50,000 farmers have been making good profits out of JOLIET Corn Shellers in the past 69 years. Are you one of them? Own a JOLIET and you save profits by being able to shell and deliver your corn when roads and markets are good. Then too, you can make big profits shelling for neighbors.

JOLIET, The World's Greatest Sheller

"Famous Wherever Corn Grows"

Rugged steel construction, will bear travel on roughest roads and most gruelling work. Any 8-16 Tractor runs the 6-hole spring or No. 1 cylinder Sheller. Simple and powerfully built for speedy and efficient work. Furnished with horse power if desired. Only cylinder sheller made with beaters warranted for 5 years. *Elevators pay higher prices for corn shelled by the "Joliet,"* because it is shelled right.

There's a size for your particular needs either in spring or cylinder shellers for shucked or unshucked corn.

Send us your name and receive our 1920 catalogue which tells all about the entire JOLIET line, also other interesting corn shelling information. Write today.

Some choice territory for dealers open.

Joliet Manufacturing Co.
69 Youngs Avenue
JOLIET, ILLINOIS

"Jobbers Throughout the Corn Belt."



Mention The American Thresherman and Farm Power

to put on when they get worn too thin. With the drive gears on the drive axle, most men never know how badly they are worn until they break, and when one breaks the whole nest generally breaks and then you sure have a job, and you will have to spend some money to get good bearings and good gears to stand that tremendous end thrust and twisting of that type of drive, good bearings cost money.

Kimball, Nebr. E. A. HYATT.

I am sending you a picture of our threshing rig in operation. It consists of a Gaar-Scott 31x49 separator and an I. H. C. Titan 18-35 kerosene tractor.

Looking over the letters in the January issue I saw some letters written by old threshermen who have threshed a good many years. I would be a greeny on the job com-

the motor down and, of course, was quite expensive. But the worst of it was, the welding broke open after about three weeks running. Now the car is standing idle with a brand new set of tires on it. My advice on buying a secondhand car would be, "Don't," unless you were personally acquainted with the conditions of the car and were sure that it would not pile up a large running expense.

Our Ford car we have run between fifteen hundred to two thousand miles and aside from punctures we have had no real trouble.

The Waterloo Boy we bought secondhand and never used it very much. My brother and I remodeled it, taking off the old mixer, which was a complicated, cumbersome affair, and substituted part of a Galloway mixer and part of one we made ourselves. It runs nicely, but does not develop much power on account of



Elmer Zollinger, Marshallville, Ohio, Casts His Vote for Gas in Preference to Steam.

pared to them, for I have only threshed two seasons. I am only seventeen years old. I have never threshed with a ground hog separator nor with horse power or steam power, but I do think we have a more up-to-date rig than those old threshermen had. I think a tractor has it over a steam engine for threshing.

ELMER ZOLLINGER.

Marshallville, O.

We have a 1914 Model Case car, a 1919 Ford, a 4-horse power Waterloo Boy, a 1½-horse power Fairbanks-Morse, a ½-horse power Maytag washing machine, and a 1913 Model Excelsior motorcycle, so we have lots of chance to test our mechanical skill.

Our Case car we bought secondhand and got it cheap, but it turned out to be a rather expensive deal. We did not know much about cars and therefore did not examine it closely before buying it. After we had had it a couple of weeks it ran out of cylinder oil. I put in a quart of oil, but this lasted only about two days, then I discovered that both motor support arms and the lower crank case were cracked. We had them welded which necessitated tearing

the piston being badly worn and leaking compression.

The Fairbanks-Morse we use for running the fanning mill and kicker and also the pump when the wind does not blow.

My experience with the motorcycle has not been altogether pleasant, consisting mostly of pedaling, pushing, coaxing, etc., then perhaps a short spin more or less speedy and then ending in a spill, or, as once happened, in a barb-wire fence.

Last winter I rigged up an aerial drive snow sled with the motorcycle engine. I used a framework of wood two by two inches mounted on four skids. The engine was in front driving an overhead countershaft. The engine made five revolutions to the shaft's three. The shaft runs in roller bearings with a ball end thrust bearing and is driven by the motorcycle chain. Mounted on the shaft is a five-inch tractor type propellor which makes about one thousand revolutions a minute. For quite a while I could not make the outfit pull, but at last by changing the timing of the magneto gears, adjusting carburetor, etc., I got it to pulling. I only took one short ride but the sled traveled about

fifteen miles an hour and then with only two-thirds open throttle. I ran out of gas and had to push it back to the shed. I took sick the next day and was not able to use it again.

My brother purchased his tractor last fall and certainly it is a good machine. We never use anything but kerosene for fuel. It used about twenty-six gallons in a good day's threshing. It handles a 26x46 inch separator nicely. It pulls four plows easily, but where the footing is poor one makes better headway and does more plowing by using only three furrows. I ran it for about a week last fall plowing. I liked it pretty good, but you have to keep moving fairly steady to keep ahead of horses. Where I lost most time was filling up with kerosene and water, and oiling up. A person should have everything as handy as possible so as to save time. I could have made much better time if I had had a pump in the kerosene barrels to fill the engine tank with instead of lugging a big ten-gallon can around. The only time I gained on the horses was in the mornings, at noon and in the evening. In the evening the teams quit about 6:15 and I would stay out until about 8:00 or 8:30.

One trouble we had with the engine, and I may say the only serious trouble, was that of missing on the right hand or first cylinder. The engine is a two-cylinder, horizontal, cast-en-bloc, with cranks one hundred and eighty degrees apart. The engine will run fine, when for no apparent reason this cylinder will start missing. It makes no difference whether the engine is running idle, under load, fast or slow. It also bothers occasionally when starting; this cylinder will not fire till engine is thoroughly warmed up. It has good compression, spark seems good at all speeds, valves are all right, and we have tried adjusting needle valve and carburetor air valve, but it does not seem to make any difference. If any one has had the same experience, I would be glad to hear how he remedied it. **JOE W. HUGHES.**

Cando, N. D.

I have been in the threshing business for sixteen years. I have had four threshing rigs. Last spring I had a fire that burnt up a new machine that had only run sixty days. I also lost seven head of horses, a wagon, a new feed mill, a 32x42 barn, and several other things.

I now have a Rumely 20-40 Oil-Pull engine and a 32x54 Wood Brothers separator. I like this outfit better than any I ever had. I also have a 1½-horse power gas engine and a 4-horse power Cushman, which I use for running the light plant, a Buick automobile and a Maytag shredder. **JAS. D. BECK.**
Stuart, Nebr.

Filling Silos

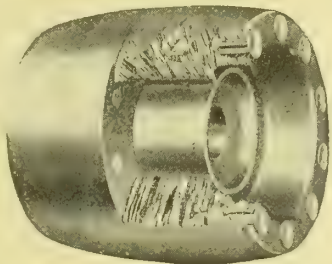
with Greater Speed and Economy

CUTTING SILAGE and blowing it up into the silo requires full, dependable power—power strong and steady enough to keep the silage moving up the pipe in an even stream—power strong enough to send it *over the top* without faltering.

To meet this demand for steadier and surer power, Rockwood, *The Drive Pulley*, is becoming widely used. With Rockwood, *The Drive Pulley*, all the belt power of the engine is delivered to the blower and cutters. Belt slip is practically eliminated, and *maximum* output with heaviest feeds can be maintained. Rockwood, *The Drive Pulley*, gives years of service with neither trouble nor repairs. An iron pulley *slips*, a covered pulley *"strips,"* but Rockwood, *The Drive Pulley*, does neither—it GRIPS!

Rockwood, *The Drive Pulley*, is the *one* practical drive pulley for heavy-duty farm machinery. Many leading manufacturers now supply it as standard equipment on their silo fillers, grain separators, tractors, pumps, and other farm machines. It is to your distinct advantage to *get it* on the machine you buy. Let us send you our interesting free booklet, "Belt Power on the Farm." Write for it today.

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Avenue - Indianapolis, Indiana



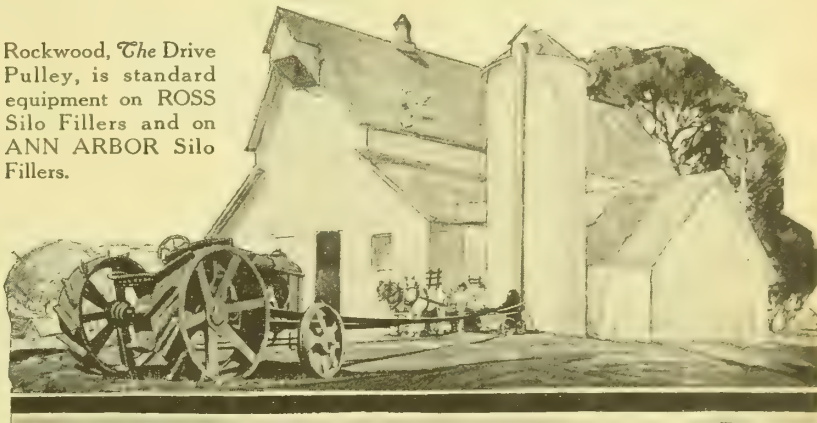
ROCKWOOD
The DRIVE PULLEY

[Section removed to show construction]

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and *wears*.

Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

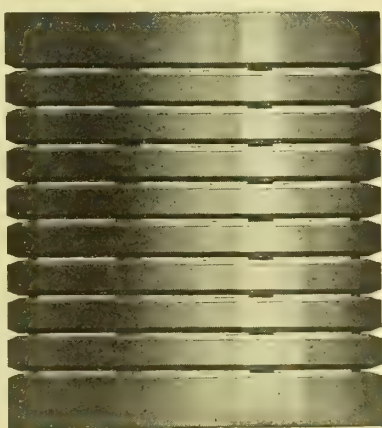
Rockwood, *The Drive Pulley*, is standard equipment on ROSS Silo Fillers and on ANN ARBOR Silo Fillers.



All the Power—All the Time

ROCKWOOD, PULLEY SERVICE

Mention The American Thresherman and Farm Power



The Vacuum Non-Slip Pulley

does away with leather covering and belt dressing on all high-speed machinery, and saves belt and power.

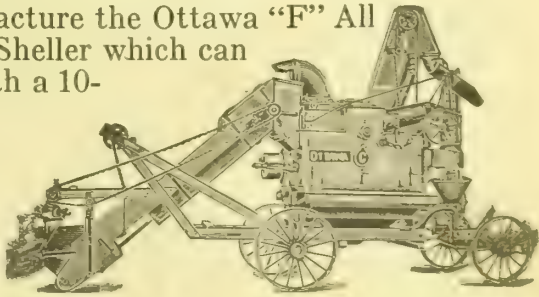
Write for Circular

Vacuum Non-Slip Pulley Co.
1811 Arcade Building St. Louis, Mo.

Ottawa Cylinder Corn Shellers

The OTTAWA gets all the corn no matter how soft, dirty or rotten

We also manufacture the Ottawa "F" All Steel Cylinder Sheller which can be operated with a 10-horse gas engine.



Write for Catalog

KING & HAMILTON COMPANY OTTAWA, ILLINOIS
Branch Houses: Council Bluffs, Ia., Sioux Falls, S. D.



Saturn Rubber Endless Thresher Belts

They do not absorb moisture, have minimum stretch and long life.

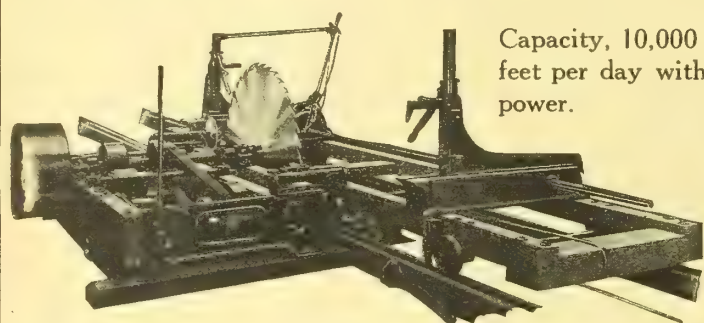
If your dealer cannot supply you, address

The Gutta Percha & Rubber Mfg. Co.
303 W. Randolph Street, CHICAGO

New York Chicago San Francisco
Boston Seattle

Mention The American Thresherman and Farm Power

DIXIE "E" SAW MILL



Capacity, 10,000 to 25,000 feet per day with 25 horse power.

We make a full line of high grade mills of all capacities, in fact, anything needed for saw mill or wood cutting.

HILL-CURTIS COMPANY

1504 North Pitcher Street, Kalamazoo, Mich.

Mention The American Thresherman and Farm Power

Mason Made \$2500 Net In Five Months

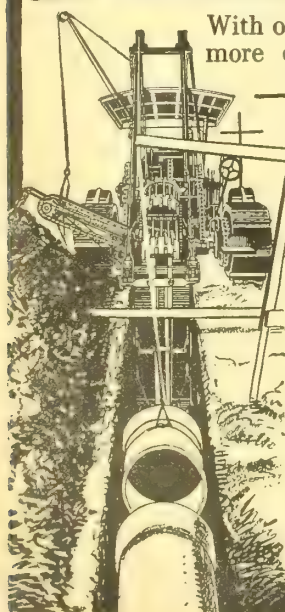
Nice amount of money for five months' work, isn't it? You can do it as well as Mr. Mason and hundreds of others are doing. The demand for traction ditching is enormous. You can make big money with a

"A Perfect French at One Cut"
BUCKEYE
Traction Ditcher

READ THIS LETTER

Work has been so plentiful that I have turned away more than I have done. The machine has given entire satisfaction and far exceeded my expectations. I find it very easy to average 130 rods working ten hours. The machine has been in operation for five months and during that time I have done work amounting to \$4000 which netted me \$2500

VICTOR MASON
Mt Pleasant, Iowa



With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send For Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for the book, you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.

198 Crystal Ave.,

Findlay, O.

Trucks as Trolley Substitutes

THIS title was originally called "Trucks as Strike-Breakers," but we didn't like the sound of it. Years ago there lived in lower New York City, on Bleecker Street and thereabouts, a class of men who were professional strike-breakers. They were far from admirable. Most of the time they loafed. If the copper miners in Utah had trouble with the mine owners, these men were ready to make a long trip—at high wages—to break the strike. Then they would take several weeks to live—not work—on Baltimore docks, or ride the Boston elevated roads stripping fares with brazen assurance.

Trucks are not this sort of strike-breakers. They have, in the past few weeks, done much to make conditions endurable during trolley or manufacturing plant strikes. It seems fairer to the trucks and the striking workmen to call the trucks trolley-substitutes.

During the middle of July, Chicago was wrestling with grave problems created when the electrical switch-board workers, only a few hundred in number, suddenly decided to strike. This strike, it developed later was not earnestly desired by a large number of workers, but seemed to be controlled and ordered by a man who had recently served a prison term. Soon after his release, as an officer of this union, he forced a strike. As a result, nearly all surface lines in this great city of three million persons were forced to suspend operations. Men had to walk or ride as best they could. Every truck had a load.

Akron faced a trolley strike early in July. Now Akron is a "rubber-tired" city. Much of its manufactured product is shipped by truck. As a result, the twenty-two rubber companies of Akron combined to solve the problem of transporting sixty-five thousand employees to and from work during the strike.

M. D. Scott, transportation engineer for Goodyear, divided the city into zones and routed the vehicles for his company over the principal streets with dispatchers stationed at congested points to load the crowds and keep the trucks moving.

Each truck bore a sign indicating the route it traveled. Each was parked near the factory by curbstone standards which also told the route it followed.

Drivers for all of these vehicles slept in Goodyear Hall near the factory during the strike. Extra crews kept the trucks in operation over night owl runs.

The service maintained won the praise of all car riders, as it was not restricted to company employees.

One of the innovations of the strike was the mustering into ser-

vice of the new Goodyear six-wheel motor vehicle. Equipped with a special street car body, it is probably the largest motor bus in America. With pay-as-you enter arrangement, upholstered seats and complete equipment, it seats forty-four passengers. Including standing room, it will accommodate ninety persons. The tandem rear axle arrangement made possible greater traction and easier riding, and enabled the huge bus to carry enormous loads during the strike.

The new bus resembles a street car in size and shape and while it was being driven from Rochester, where the body was built, a ruralite near Buffalo exclaimed on seeing it, "look at the trolley car on rubber tires."

The passenger bus is a successful experiment with six-wheel equipment. It can develop a speed of twenty or twenty-five miles an hour and astonishes all passengers by the easy and comfortable riding qualities over the most lumpy pavements.

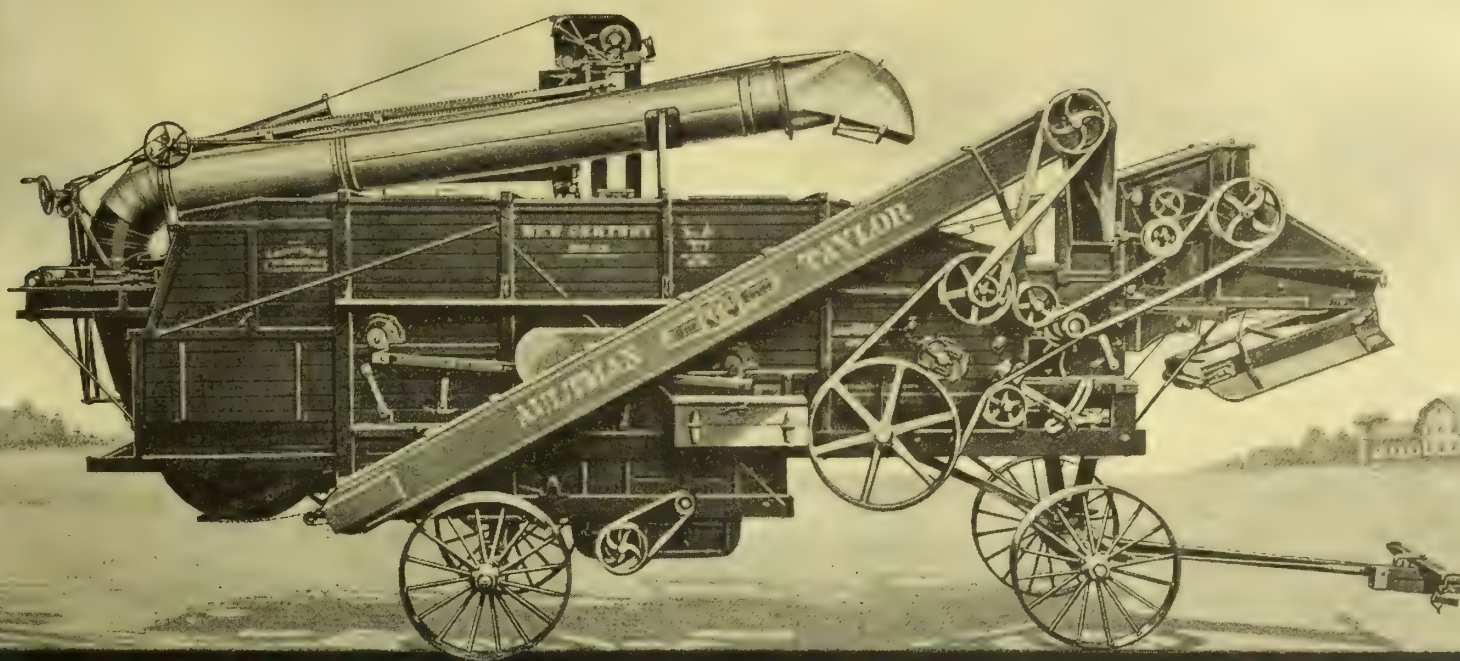
At first glance one would think the bus was rather high from the ground but the impression is gained from the wheel boxes in the body which are cut high to permit experiments with the largest pneumatic truck tires made. The bus was designed to be operated either on six or eight wheels, with double trucks at both front and rear.

This bus carried capacity loads during the strike. It enabled factory and office workers to earn their wages, and it brought many "city farmers" from their small garden-farms to their places of business. It kept alive the demand for the fresh vegetables of near-by farms and did much to prevent disorganization of farming industry in the Akron region.

Workmen are not the only strikers, these days. The freight cars seem to have gone on a strike, as far as total numbers are concerned. To be sure, we can't recall off-hand where we saw an idle freight car lately; but we have been waiting patiently for our household goods, shipped some weeks ago. Has that particular freight car struck?

The truck has been getting busy where Mr. Freight Train found himself unable to bear present working conditions. Mr. E. Farr, director of the Firestone Ship by Truck Bureau, of Akron, recently told of the California situation as he had found it.

"California," he said, "has a fairly good system of motor truck routes. Right now probably sixty per cent of all local inter-city freight in the southern part of the state is shipped by trucks. Yet it is estimated that approximately sixty per cent of the perishables grown in the great Imperial Valley will rot in the fields because of lack of transportation.



Better Threshing with Less Power

YOU'VE threshed with the ordinary type of thresher. You know the killing vibration it goes through all the time it is working—the constant shake, shake, shake. You realize the wearing strain—the waste of power this racking vibration **must** cause.

Now, think of a thresher *that is practically vibrationless*—that works with the smooth-running ease of a piston—that is so perfectly balanced that an 8-penny nail will stand on any level part of it while in operation! And with that—a machine that saves *all* the grain you feed into it.

That's the Aultman-Taylor New Century Thresher!

Now, let's look into the "why" of the smooth and economical operation and perfect separation of the New Century.

Hyatt Roller Bearings

Take hold of the end of the cylinder shaft of the New Century with your thumb and first finger. Now give it a twist. It spins as easily as if mounted on the finest bearings. *IT IS. Hyatt Roller Bearings, used on the cylinder shaft of the New Century, make this the easiest, smoothest running thresher on the market.* Tests show a saving of several horse power over ordinary babbitted bearings.

Think what this means to you if you own a small tractor and are looking for a thresher to match your power. *Think of the power and fuel it saves!*

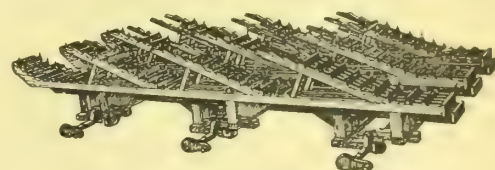
The Stamp of the Old Starved Rooster is Your Guarantee of Reliability.

Aultman-Taylor Saves All the Grain NEW CENTURY



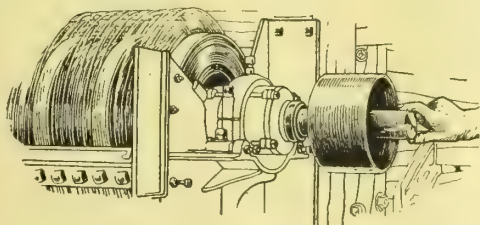
100% grain saver. The Universal Rotary Straw Rack and Inclined Open Web attend to that. *These two devices absolutely prevent clogging, double the capacity and insure perfect separation.*

Remember too, that the New Century is a



Universal Rotary Straw Rack

This rack gives double the separation of the ordinary vibrating type. It has a two-way movement agitating the straw twice to each revolution of the crank shaft. Thus it moves the straw *continuously* rearward. It prevents bunching, eliminates vibration and saves power.



Hyatt Roller Cylinder Bearings

Hyatt Roller Cylinder Bearings effect a saving of several horse power in operation of the machine and avoid any possibility of heated bearings. Your small tractor will operate a Hyatt equipped New Century when it would be impossible to operate a smaller size machine without them.

Aultman-Taylor makes four sizes of threshers—all absolutely standard in design and construction. *The two smaller threshers are the ideal sizes for individual use with your small tractor.*

Ask any New Century owner. There are 35,000 of them over the country. Or see your dealer—or write us direct, *Mansfield, Ohio. Canadian Branches: Portage La Prairie, Calgary and Regina.*

The Aultman & Taylor Machinery Co.
Mansfield • • • Ohio

Thirty-five thousand New Century Threshers in the field today.

Fifty-five Years' Experience Building Farm Power Machinery



Digging holes stunts trees —blasting insures growth

Blasting beds for trees with Atlas Farm Powder overcomes every disadvantage that goes with ordinary planting. It breaks up the soil to a depth never reached by digging, frees the plant food stored below, enables roots to grow in all directions unhindered and provides better drainage and moisture storage.

J. A. McLain, of Fredericktown, Pa., provides proof of what Atlas Farm Powder really does toward insuring tree growth.

"I planted 225 apple trees with Atlas Farm Powder and 20 apple trees with a spade. I lost only 1 out of the 225, but I lost 4 out of the 20 spade planted. The difference in growth made from April to October the same year was 6 to 8 inches."

Our book, "Better Farming with Atlas Farm Powder," has shown thousands of farmers how to have better trees and fruit. It also tells how to blast stumps, shoot ditches, break boulders, etc. Write today and get a copy free.

ATLAS POWDER COMPANY
Division AT-6 Philadelphia, Penna.

Dealers everywhere

Magazines near you



Mention The American Thresherman and Farm Power

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (total disability).....	\$10,000.00
Loss of eye.....	\$ 1,990.00
Loss of hand.....	\$ 2,500.00
Loss of index finger.....	\$ 650.00
Broken leg.....	\$ 200.00

Even though the law did not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us for a minimum premium of \$30.00.

Let us assume all your liability. Write us today for application blanks and full particulars.

**Threshermen's National Insurance
Company, Ltd., Mtl.**

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

Mention The American Thresherman and Farm Power

"The trucks can transport to meet local demand, but when this demand has been met ninety per cent of the crops of the valley remain. This ninety per cent generally is exported to other states. This exportation involves long hauls. It requires eleven thousand freight cars. This year the growers are unable to get anything like that number. Instead of the required five hundred to seven hundred cars daily they are getting only two hundred.

"Now if a majority of the production areas of the United States had motor truck facilities equalling those of southern California, that section would not be in this predicament. Instead, freight cars that are today tied up all over the country on slow short hauls would be relieved of this duty by motor trucks and assigned to this and other long haul freight carrying, where they are much needed."

While not all sections of the United States have the motor truck facilities of southern California, the sections around Akron, Detroit and Chicago have. The number of these truck centers will multiply. Every strike will add to their size. When human power, trolley and steam road find themselves unequal to the job, they call on the truck—and the truck seldom fails.

Companies that follow closely the needs of farmers in transportation lines have recognized the need of supplementing rail transport with motor transport. To talk with some of the specialists who are trying to

foresee farm needs is to get a new vision of America.

The big rubber companies are not the only organizations doing this work. The big implement manufacturers are making investigations all the time. Their efforts are not for the sake of immediate financial returns. They realize, as do large employers of labor, that correct forecasts and helpful advice will go far to establishing cordial relations between makers and users. These are great factors in ultimate success.

It was announced recently that one great implement company is to erect at Fort Wayne, Indiana, the largest motor truck plant in the world, to increase its truck manufacturing schedule. It is now known also, that other of this company's plans, which have long been under advisement for enlarging motor truck manufacture, have now come to a decision. The company will add a new truck to its lines and its big works at Springfield, Ohio, will be turned over to the exclusive production of this new model.

Since the old plant contains seventy acres, and the new plant one hundred and sixty acres, you can gain some idea of the tremendous size of motor truck plants at present. The motor shops are fast becoming similar to the general shops of big railroads, such as the Santa Fe at Topeka. And these big plants are needed. When the emergency comes, these plants will turn their fleets toward the locality where their help is required.

A Train Load of Greyhounds

IT takes a lot of Greyhounds to make a train load, and Greyhounds, as our Swede friend would say, "Ban going some."

This shipment of the youngest threshing machine on the market is proof that its builders have also "Ban going some." These threshers were shipped by the manufacturers, The Banting Manufacturing Company, Toledo, Ohio, to their jobbers in Chile, the longest strip of country in South America. The tail-end of Chile runs down to Cape Horn, and it is further south than Patagonia, where

the cannibals used to eat missionaries before the latter became "gun-shy."

If you want to know how near the cannibals came to getting "Bill" Kiracofe of the Banting Machine Company when he was down there negotiating with the natives, ask the Banting Machine Company. Some of Bill's Madison friends, whom we might mention, allege that the only reason the cannibals let Bill through the seine was because he was too tough for their use, but we don't believe this at all; he's a real grown-up Sunday school scholar.



All Aboard for Chile!



LEROY W. BLAKER

LeRoy W. Blaker Says:

"I think the Port Huron Longfellow High Pressure Compound engine is one of the best engines made. They are easy to handle and are Certainly Economical on Water and Fuel.

"They will throw the least sparks of any traction engine made owing to the deep fire box, long tubes, long smoke box and gentle exhaust from compound cylinders."

(Signed) LEROY W. BLAKER,
Hudson, Mich., June 1st, 1920.

What Ora J. Sarff Says:

This season we sold Mr. Sarff a 33x54 Port Huron Rusher Thresher, and promised to send a man to assist him in getting the machine started when he notified us he was ready. On July 28th we received a letter from him saying:

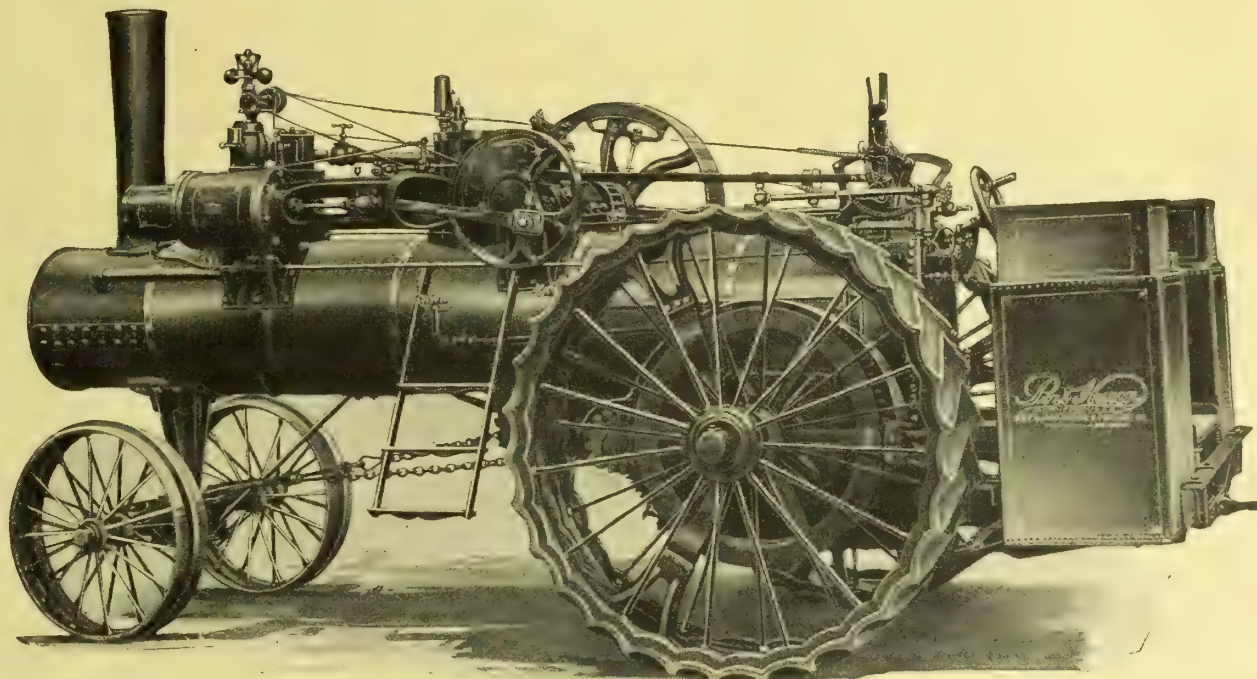
"I started the new machine Monday and it did such good work I thought it useless to have a man come down from Peoria. It beats all the machines I ever saw for threshing, cleaning and saving the grain. If I was to buy another thresher they would have to show me by actual test there was a better machine than the Port Huron before I would consider any other kind."

(Signed)

ORA J. SARFF, Bath, Illinois.

PORT HURONS

Save the Farmers' High Priced Grain and Fuel

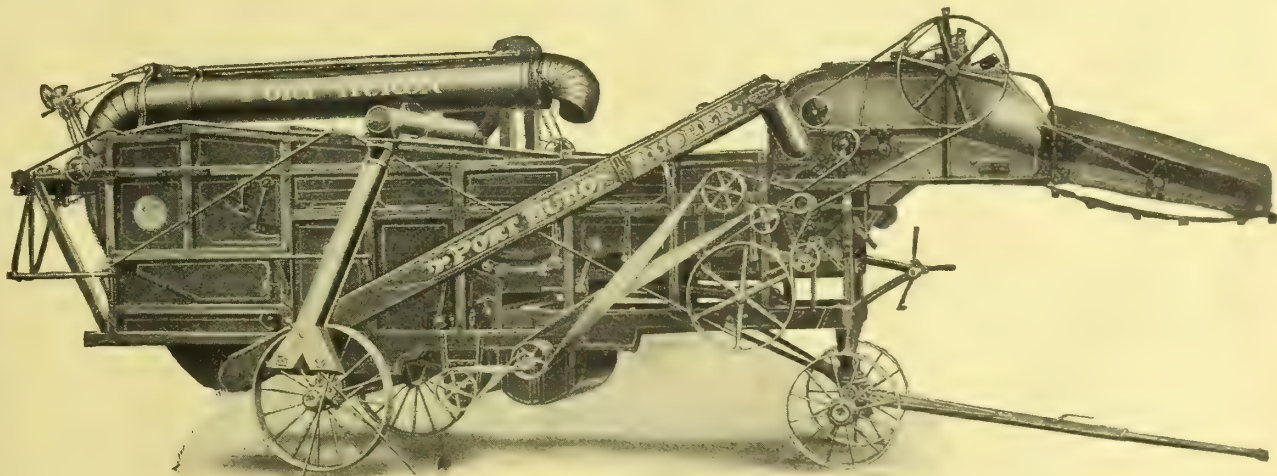


PORT Huron Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market to-day. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them.

PORT HURON LONGFELLOW HIGH-PRESSURE COMPOUND—2 SIZES: 19 and 24 H. P.

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor-Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.

The famous Mule-Kick Separation beats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing.



PORT HURON RUSHER WITH MULE-KICK SEPARATION AND RAZOR-BACK TEETH
5 SIZES—A SIZE FOR EVERY REQUIREMENT

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Port Huron Co. of Illinois
Peoria, Ill.

Port Huron Mach'y Co., Ltd.
Des Moines, Iowa

Port Huron Engine & Thresher Co.
Wichita, Kansas
Port Huron Engine & Thresher Co., Logansport, Ind.

Port Huron Mach'y Co., Ltd.
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Port Huron Mach'y Co., Ltd.
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Sold direct from
Factory to Farmer
Write for catalog
O. B. Wise Pulverizer Co.
Knoxville, Tenn.

Mention The American Thresherman and Farm Power



Treat All Seeds


Take no chances. Smut is a common disease which usually decreases the yield of grain as much as 20%. **Formaldehyde** is endorsed by the U. S. Department of Agriculture as the standard treatment of seed grain, to prevent smuts, fungus growth, potato scab and black-leg.

FORMALDEHYDE
The Farmer's Friend

Insures a full yield because it destroys all forms of smuts and checks all plant diseases known to affect grain crops. Can be used also on the soil. One pint bottle of **Formaldehyde**—from the Laboratories of the Perth Amboy Chemical Works—treats 40 bushels of seed. New hand-book just issued free.

Perth Amboy Chemical Works
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Red Devil
RED U.S. PAT. OFF.
Pliers
No. 1950
Extra Heavy

If you work around motors or machines of any kind you will want a pair of pliers for slight adjustments and repairs. You will also want a good, heavy pair for heavy work.

You'll find more than 50 different kinds of pliers in the "Red Devil" line. We suggest No. 1950 for your heavy pair.

It is forged from tool steel and has a hexagon throat so that it can be used as a wrench. The handles are so shaped that they cannot pinch. Gun metal finished handles; polished steel head.

Send for our booklet of hand tools for mechanics and motorists. It illustrates many different tools: Hack Saw Frames and Blades, Chisels, Punches, Chain Drills, Pliers, Auger Bits—a full line of hand tools for mechanics, electricians and motorists.

Booklet on request

Smith & Hemenway Co., Inc.
270 Broadway New York

Aunt Malinda

WELL, the women have at last got a chance to vote and for one I'm goin' to exercise my franchise from Dan to Beersheba, you see if I don't. It was a hard pull to get the "rubes" down there to let us have a chance but they finally mustered enough votes to force the close-fisted tight-wads in the Tennessee legislature to do their duty.

I was never a chronic suffragette, willin' to go without anythin' to eat, or go to jail, or picket the White House because President Wilson didn't know whether or not it was good politics to give women a vote, but I've always felt that if women couldn't at least do as well as some of the good-for-nothin' men who 're not fit for fish-bait but who are allowed to vote, they wouldn't be any great things.

I used to hear Helen Gouger, the great suffragist of her day, lay on when she started after men for not votin' for woman suffrage, and I've had to laugh to hear her tongue-lash 'em until I could say Amen with good grace, for Helen was a spitfire sure enough. She sued a LaFayette, Indiana, newspaper once for slander and it published an article in defense of its attitude entitled "Helen blazes!" And when she read that article she sued 'em again. I told her to give it to 'em, hoof and horns, on general principles, and the way she walked up and down the platform at a Fourth of July picnic at Colfax and ripped menfolks up the back was marrow to my bones. I've always prided myself on bein' able to spill considerable peppery conversation when I get riled, and I've held the best of 'em level once in a while, but Helen Gouger could lambast the male sex harder than anybody I ever heard in full eruption, before or since.

Helen is in heaven now and others have taken her place, and then menfolks have learned a little more sense about women, and women have learned considerable more about themselves, so, if you don't mind, we'll try out the franchise to see how it works and now that we're to be considered as good as Irish, niggers and other "white trash," I hope we don't make any bigger fools of ourselves than the menfolks have done. There's goin' to be a political rejuvenation is my guess in the next few years. The signs of the times indicate it, and the country needs it, and the time is ripe for it.

You know why some of those political smarties down in Tennessee were so opposed to woman suffrage, don't you? Well, it's my candid opinion that they thought that if women ever got to vote, it was good-bye whiskey, egg-nog and all, and they were guessin' right, you can bet your last bean that they were, for women have suffered from the effects of booze a hundred times more than men ever have. They've had to share in the effects and stand the abuse of men ever since "moonshine" saw the first "sunshine." Women have borne their whiskey soaked sorrows almost from the cradle to the grave, from the days of old. It took a Civil War to free the niggers and pretend to give 'em the right to vote, which is in name only, but it required the War of the World to jar men enough loose in these old United States to give women the same rights as are granted the colored man by the constitution. But you just put this little fact into your old meerschaum pipe and smoke it, that there ain't men enough either north or south of Mason and Dixon's line to keep women from votin' when once they begin. Maybe this is another fact that those "squirrel shooters" down in Tennessee realized when they were tryin' to keep women from votin'.

You remember that old song that they used to sing down there most sixty years ago,

"There's old Andy Johnson of East Tennessee,
Who went and joined Lincoln to set the niggers free."

Well, the Yankees and the abolitionists weren't what you might call overly proud of this Tennessee president, made so by a Southerner's bullet, who swung around the circle so full of booze that he nearly fell off the back end of the train during his famous swing, but in my mind he was as good as either of them long-coated, broad-brimmed-hat-covered legislators from the cedar trees around Lebanon and the haw patches, where more than one "moonshine" still used to grind out "cawn to feed the hounds," accordin' to the Starbuck witnesses.

Now, we're all proud of Tennessee in many ways but we're ashamed of the fillibusterin' linen-duster-wearin' broad-brims who tried to keep us from votin'.

Tennessee gave us James K. Polk, of whom the opposition, like these suffrage opposin' legislators, sang during his campaign and whom they said, "You can't guess your nominee, it's James K. Polk of Tennessee," and then they went out campaignin' against him, singin',

"There they go for Polk and Dallas,
One for the rope and t'other for the gallows."

History, like the phonograph, makes no mistakes in recordin' facts just as they are enacted, and somehow you'll find somebody who can remember these things to poke before 'em when they get too smart on their hands.

A Thought that can be turned into Dollars—

What do you do with your old thresher belt after it apparently has gone the limit in usefulness?

You throw it aside, junk it, don't you? And a new belt takes its place.

In this you're no different than others. They're all doing it, or rather they were, until the *Teuson Method* of belt repairing was introduced.

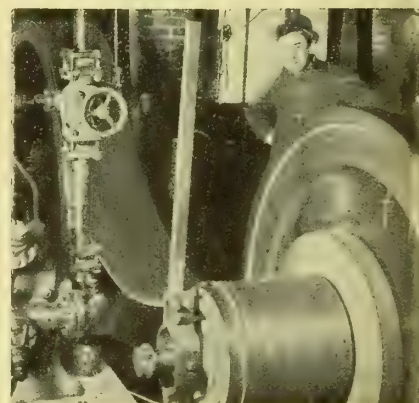
Now through the *Teuson Method* belts that were given up as beyond repair are reclaimed and transformed and to the surprise of the owners good for at least another year of good work. And the cost of rehabilitation is but a fraction of the purchase price of a new belt.

Threshermen! Send Us Your Damaged Belts

A good time to do it is right after your busy season. We'll then put them back in tip top shape, and you'll be all set for next year or for whatever winter belt work you intend to do.

Write for particulars. We're always glad to answer inquiries.

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MACH'NY SUPPLY CO.
801 N. Second St.
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Like a Team of Percherons

Did you ever see a big team dig in their toes, drop their hips and irresistibly move the load out?

That's the way a big belt running slack with *Cling-Surface* looks.

You can't make it slip. The more the load the more she drops her quarters and grabs hold.

And the same is true with small belts—any kind of belts.

It's no mystery. *Cling-Surface* keeps it pliable and in vigorous health and then stops the slipping instead of using tension for the purpose.

The rest follows. It's bound to. But only *Cling-Surface* will do it—you've never done it with anything else.

Buy it in 1, 5 or 10 lb. tins from your dealer or from us—Ask us.

Cling-Surface Company
1070 Niagara St. Buffalo, N. Y.

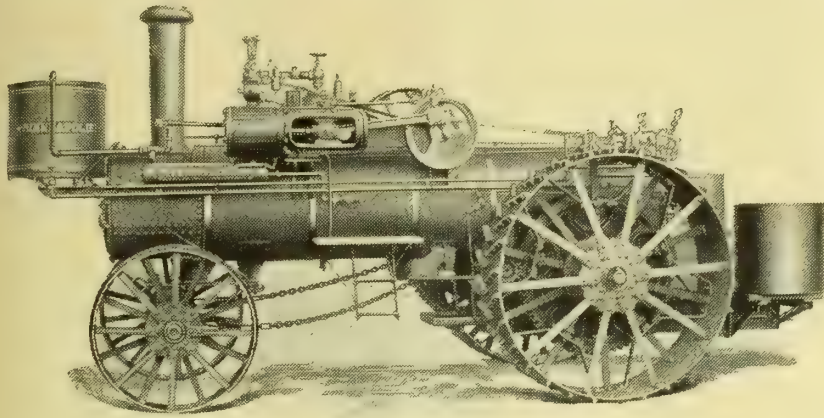
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Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

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"The Great Minneapolis Line"

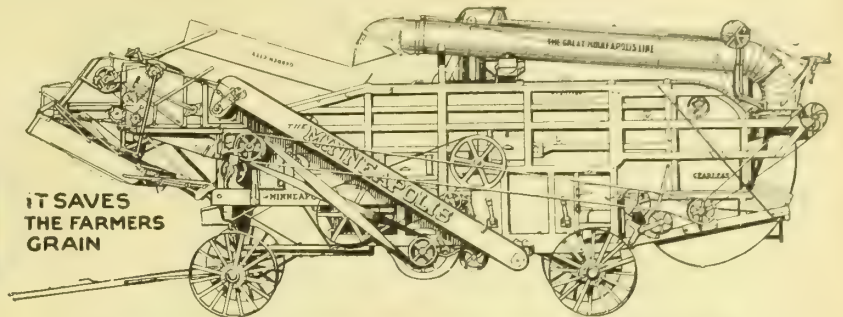


MINNEAPOLIS POWER (STEAM OR GAS)

For all kinds of traction or belt work.

Highly Efficient
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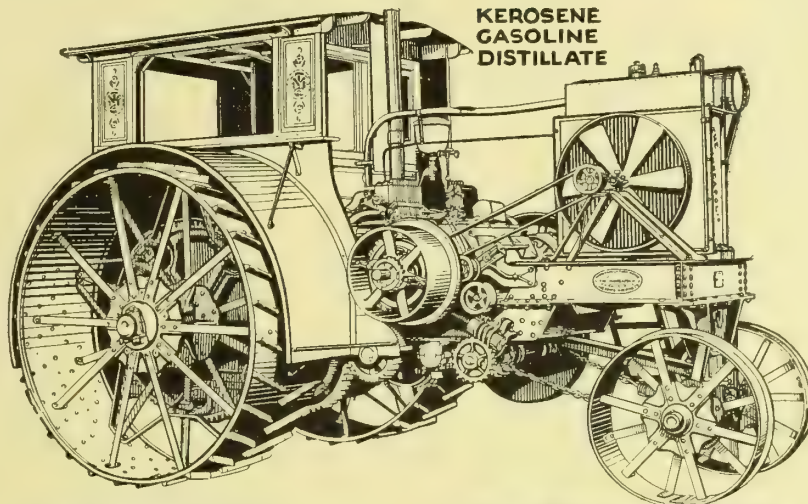
IT SAVES
THE FARMERS
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THE MINNEAPOLIS - THE POPULAR THRESHER

MINNEAPOLIS THRESHERS (BUILT IN 9 SIZES)

For threshing, saving and cleaning all kinds of grain and seeds. Are popular because of the satisfactory service they render both the thresherman and farmer.

ASK
ANY
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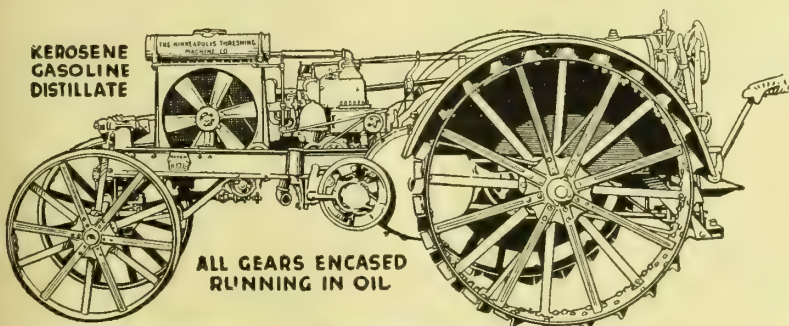


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You should have one of our catalogs which fully describes the complete Minneapolis line of power farming machinery. We will gladly forward one upon receipt of request and if you mention it a Thresher's Account Book will be included. No charge—No obligation—We want you to have them.

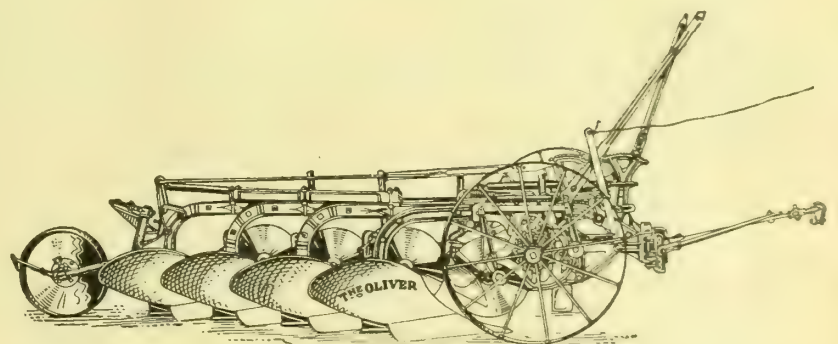


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The Minneapolis Threshing Machine Co. Hopkins (West Minneapolis) Minnesota

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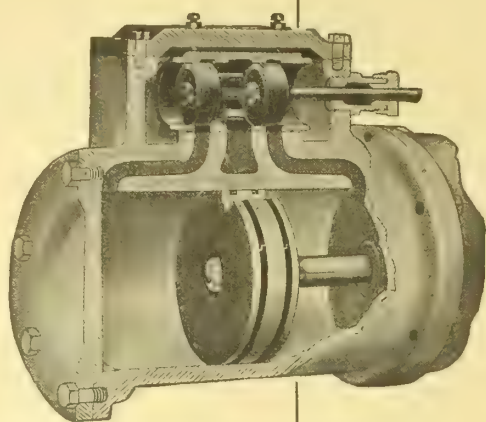
Can you reverse your engine under a full head of steam?

If you have the ordinary "D" slide valve, we'll bet a dollar to a doughnut that nine times out of ten you can't. Nor do you have an easy job to hold her in reverse.

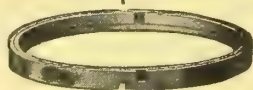
Would you like to know how to make your engine easier running all around?

If you will drop us a line, we'll send you, free of charge, an interesting descriptive folder which will tell you how the Baker Balanced Vapor Tight Valve will do this for you.

When writing, tell us the name and horse power of your engine. Take time to do so now!



By the way, do your cylinders need better compression? If they do, ask us how the Vapor Tight Ring will make every pound of steam do a pound's worth of work. We'll be glad to tell you, free of charge.



BAKER VALVE COMPANY
28th St. and Cedar Ave.
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Box 1772 AT



Quick Detachable Rocker Grates

You can change your straight bar grates to TRAVIS ROCKER GRATES in 30 minutes, time.

This will give you full control of your draft.

Poor fires and low steam will be a thing of the past.

G. E. TRAVIS

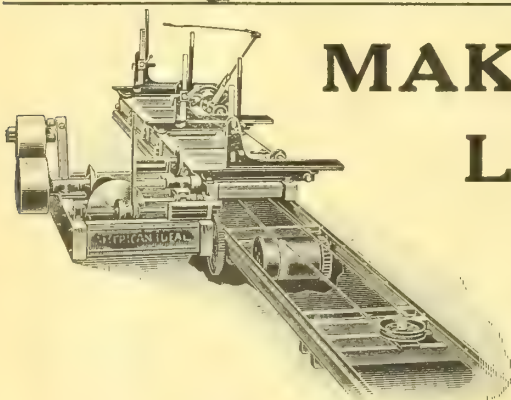
Poor coal requires better grates.

If you have firing troubles, order Travis Grates.

Give us the length and the width of the fire box from wall to wall.

We can ship on first express or freight.

HENRY, ILLINOIS



MAKE YOUR LUMBER—DON'T BUY IT

The price of a carload of lumber will buy an "American" Farm Saw Mill that will cut a carload of lumber a day from those trees standing in your wood lot. Make what you need for yourself, then sell the surplus to your neighbors—with a good profit.

American Saw Mills

Are simple, sturdy machines that need no skill or experience, stand hard service, and do a tremendous amount of work with small power. Use your tractor or gasoline engine—keep it busy, earning money. Send for the catalog—begin lumber profits now.

AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, N. J. NEW YORK, N. Y.
71 Main Street 1371 Hudson Terminal

What He Least Expected

By HOLWORTHY HALL

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Bobbs-Merrill Co.

"JIM had to go south one time, and because he is usually pretty prudent, he made my uncle sign an assumption of the management of the estate, and a waiver in Jim's absence. And as soon as my uncle was in charge, he figured that if Jim could pick up cash so easily he ought to do it, too. Frances' money was in good bonds, and my uncle converted some of them, without telling me or asking advice, and made twenty thousand dollars overnight. It was for Frances, you understand—he thought he could make a couple of million for her. He never had a thought of profit for himself. He broke into Steel, and got three points. Then he lost sixty in Reading. He tried to recover in New Haven and it went blooey. When Jim came north, my uncle had lost a hundred and thirty thousand dollars of Frances' money for her. And then Jim had him cold. My uncle had signed, sealed and delivered an acknowledgment of the entire responsibility. The court had passed on it before Jim left town. All Jim had to do was to ask the Probate Court for an accounting, and my uncle would absolutely go up the river for misuse of funds."

"But, Ned, I—"

"Hold on, Phil! For my uncle there was just one way out. You see, if Frances didn't marry inside of five years, there'd be an accounting for her benefit, and nothing on earth could save my uncle. The executors would have to come clean. The matter wouldn't be hers. She couldn't waive any loss; or absolve Mr. Cloud; and Jim could force the prosecution to the limit. But if she *did* marry, she'd have a specific amount, and the remainder would go to my uncle anyway, and he could falsify the accounts without danger, as long as he was the only party in interest. That was what Jim persuaded him. Frances *must* be married. Because Jim got the bright idea that if he could marry Frances himself, then my uncle would get the estate, and he'd already have made a big slice of it over to Jim, really in consideration of Jim's keeping him out of jail, but ostensibly in consideration of legal services. Jim was to get three-quarters of what my uncle got, and Frances' hundred thousand besides. Altogether about a quarter of a million. Where's the flaw in it?"

"Wow!" said Hollister in rapt wonder.

"So he could force the hand any way he played it. And if anybody else did marry Frances, Jim would lose her hundred thousand, although he'd get the graft from my uncle. If he married her himself, he'd get the whole wad. See?"

"Gosh, yes!" said Hollister

"And at the last minute, Diederick had a relapse. I guess he knew he was going to die. He had nothing much against you, and for a long time he'd been thick with Jim. He knew if he died without making a statement, one of you stood a chance of a second-degree conviction. So he used up the last drop of the milk of human kindness he had, and protected both of you. Incidentally, Jim had promised to give him ten thousand dollars if he lived. Jim told me that himself. He took long odds, didn't he?" Ballin got up from the bed, and looked down at his supine friend.

"Well, Phil—Edith's gunning for Jim now, and he's hunting for cover. We've got him in a worse place than he had us. We're going to court in an hour or so to charge him with killing Diederick. Frances says she heard their voices, Edith saw the beginning of it. So—"

Hollister stared at him quizzically.

"You've been telling me that you hired me in cold blood to marry your cousin, Ned."

"Phil! Not that! I wanted to see if you *did* like each other! I've told you—"

"You thought I'd like her and that she'd like me—you'd have been willing to have me marry her anyway—and you thought that if I did, it would clear up the whole situation—"

"Yes, Phil. I can't blame you for what you must be thinking—"

"Whoa! This is *my* monologue! Honest, Ned, that was a wild scheme! You'll have to admit that yourself! It's worked out pretty well for you—"

"It's *you* I'm thinking of now."

"So am I. Under the circumstances, if you're sure you wouldn't have objected to me anyway—"

"For Frances? Phil, I certainly would *not*. Why, that's what decided me! I'd always thought so much of you—"

"But now that Miss Rexford's given up Hartwell—well, your uncle's still in danger, isn't he?"

"I'm afraid so," said Ballin gloomily.

"And if Frances is married, he'll be safe?"

"Positively."

"Hartwell can't touch him?"

"Not after that."

"And you still think you're willing to have me marry her?"

"Yes, Phil! Old man—for the love of mud—"

"I'm going to, that's all," said Hollister placidly.

"Everything is fixed. Don't rip around so! Sit down and watch me eat!"

And he applied himself vigorously to his cold and sodden breakfast.

CHAPTER XXVII.

Mr. James Hartwell, in whose person the governor and council and the provost marshal had more than a superficial interest, had disappeared. Not on a north-bound steamship, for none had cleared at night; not on a south-bound steamship, for none had departed the port. Nor had Mr. Hartwell taken refuge on any of the vessels in the anchorage of the Great Sound, off Gray's Bridge, and Buck Island or in Castle Harbor by St. George's, or off Whalebone and Tobacco Bays on the North Shore. At half past nine at night he simply walked out of the Hotel Hamilton, and down Queen Street, and vanished utterly.

But the colonial associates of the race which nurtured Sherlock Holmes have inherited from the common ancestry that peculiar determination, that inflexible perseverance, which makes its progress as unexciting and as inevitable as the march of the tides and the lapse of time. A few unprepossessing men in unfashionable clothes went out-of-doors, and scattered to the four corners of the islands, a subaltern in a bare office spoke lieurely over his telephone, and straightway the Bermudas were invisibly walled by a barrier somewhat less penetrable than steel and iron. Mr. James Hartwell—43, 12 stone, 5 ft. 11 in., dark, slightly bald, grayish hair, grayish mustache, black eyes, good teeth, smallish ears close to the head, last seen at 9:30 p. m. at the corner of Front and Queen Streets, dressed in a light gray flannel suit, fedora-shaped Panama hat, tan shoes, carrying a black leather handbag—Mr. James Hartwell of New York—was wanted. And since the only way Mr. James Hartwell could have removed himself from Bermuda was by boat, and since he hadn't done so, then men in unfashionable clothes coincided, without exulting, in the belief that they ought to pick him up in about twenty-four hours; for since Bermuda is a colony of hardly more than twenty-five square miles, and admits but a thousand of population to the mile, a census of aliens is a comparatively easy matter. And in the meantime, owners and commanders of boats were politely reminded of the statute concerning whomsoever shall harbor, or give aid or comfort to a fugitive from justice.

Mr. Hartwell, it was conceded, had made the usual error of those who gamble with the laws. He had confided too much to a woman who loved him. Any, given time and opportunity, any such woman becomes a betrayer for one of three reasons: because she is naturally talkative, because she has ceased to love, or because

she has developed a conscience. Mr. Hartwell had entrusted to Miss Rexford the secrets of his guilt in the legal provinces of fraud, of trespass, of breach of trust, of conspiracy, of blackmail, and of felonious assault, which had suddenly become merged in the graver crime of murder. That last offense was what would swiftly terminate the hitherto successful career of Mr. James Hartwell—if apprehended.

And there was little doubt that he would be apprehended. Twenty-five thousand people, inflamed not so much by the colonial reward as by the excitement of the chase itself, set fifty thousand eyes to the task; and innocent middle-aged strangers, equipped with grayish mustaches and a tenth of a ton of avoidupois, found it expedient to remain indoors, and read Tom Moore's poems until the quest was over.

By noon of the first day, a native Bermudian of chocolate tinting, a happy-go-lucky longshoreman with more thirst than sagacity, paid for his three-penny brandy with a twenty-dollar gold piece. An hour later the governor and council, the provost marshal and the rural constabulary knew that Mr. Hartwell had been ferried out last night to the five-masted schooner *William and Mary*, at anchor off Ireland Island, that he had stayed half an hour on board, and returned to shore.

At mid-afternoon, a frightened master of craft, denying under oath all knowledge of the incriminating circumstances, related how a gentleman had unexpectedly come aboard, explained his pressing need for silence in the manner of his going—the gentleman had unfolded a narrative which would have done honor to the ingenuity of the Brothers Grimm—and paid two hundred dollars down. The *William and Mary* was to sail Thursday for Liverpool via the Azores; she was to weigh anchor at eleven o'clock at night, and she was to prepare to receive the gentleman when he came out in a launch from Bailey's Bay. The gentleman regretted that he couldn't remain aboard now; he had other business. The governor and council saw that Hartwell had anticipated the searching of all vessels at anchor; and the men in unfashionable clothes made an unruffled pilgrimage to Bailey's Bay.

They pounced speedily upon another chocolate-shaded native who owned a motor-dory, and had recently been buying brilliant gewgaws for a lady. When his teeth had stopped chattering, this involuntary informer told how a handsome white gentleman had driven up to his hovel very late at night in a barouche in convoy of a Hamilton friend, and how the Hamilton friend had said that the gentleman was fair and square—and rich. The owner of the motor-dory and the white gentleman agreed that the gentleman was to be at the post-office dock at midnight Thursday, and pay fifty dollars to be taken out to a ship. He had paid ten dollars down, and driven away.

The barouche driver from Hamilton proved, when tapped on the shoulder, to be a groveler. He was a recanter and a jail-worshiper. He invoked his ancestors, civilized, semi-civilized and barbarous, to witness his overwhelming desire to tell everything he knew. He confirmed the tale of the dory-owner, and added that he had set down his benefactor at a cross-road in the cave district where, a little way up a wooded hill, there was an unoccupied cottage adjoining that of another negroid friend, to whom he had recommended Hartwell. This had taken place at about two in the morning.

The local authorities, knowing that Hartwell couldn't get off the islands unless he swam to South Carolina, went home to dinner, and after they were thoroughly refreshed, visited the negroid in the cave district. He, too, was palsied under accusation. The white gentleman had indeed spent the night in the next cottage, which was popularly supposed to be haunted, and therefore not generally used. He had brought with him a hand-bag, and he had showed a big revolver and remarked that he could hit a jackrabbit with it at fifty yards. Then he had given over a gold piece; and early this morning he had given another, and asked where a man could hide in absolute safety for thirty-six hours. The cottage, he said, was safe for one night, but not longer. And the negroid, who was a cave guide and caretaker, had told him of a new passage in Greenland Cave—a passage only partly explored. The narrow entrance was boarded up, but the boards could be removed, and the gentleman could lie comfortably hidden in a domed chamber, with plenty of air from a natural flue. They had gathered blankets, food and candles, and gone down to

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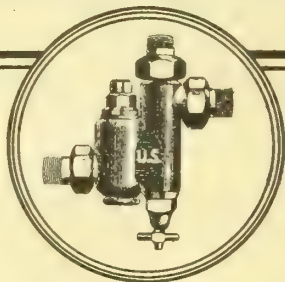
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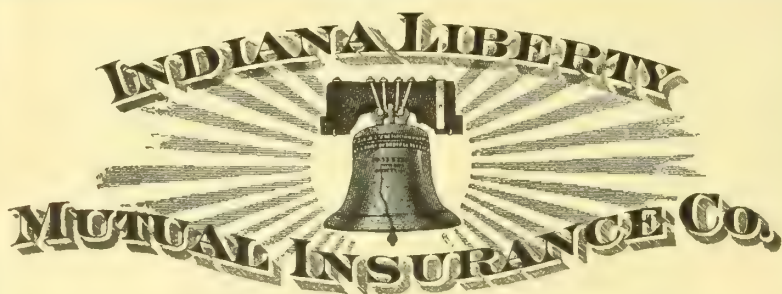
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that chamber before the world was stirring. The negroid had the keys and customarily opened the upper door before the boss arrived—there would be no suspicion attaching to him for opening it a trifle earlier than usual. At half past ten tomorrow night he was to go down and release the gentleman and drive him to the post-office near Bailey's Bay, where the gentleman was to pay him fifty dollars. The gentleman was in the cave now.

The men in unfashionable clothes—they were police constables of the first grade—went back to town, after posting a guard at the entrance to Greenland, and furnished themselves with modern automatic weapons and electric pocket torches. They took Ballin and Hollister, with a bandage partly concealed by his hat, to identify their man; and nothing they could say was forcible enough to prevent Mr. Cloud and Kirby and the two girls from chartering a victoria and trailing along behind. And so, toward midnight, the caravan drew up at the gates of Greenland Cave and Ballin pacified with fair words and lawful money the freeholder, who had been wailing bitterly because the explosion of a single cartridge would destroy by concussion half the fragile marvels among his precious stalactites.

From the tiny shack wherein he accepted daily the shillings of sightseers, the freeholder turned the switch which was to bathe the subterranean caverns in white, light. He unbarred the huge wooden door, swung it inward and stepped back.

"I don't hardly b'lieve I'll go down," he said doubtfully. "Clarence'll show you the way—Clarence always was a good boy. Wasn't you, Clarence?"

The negroid, who wasn't transported with joy at his orders to proceed as skirmisher, chattered feebly. He held back until he was reminded that ahead of him there was only one revolver, and behind him there were a dozen. Timidly he crossed the threshold, and timidly he began the descent.

Hollister had seen several of the caves, and found them essentially similar. Greenland was no novelty to him, although this was his first sight of it. At the outset there was a winding flight of steps quarried out of solid limestone; steps hemmed in by walls of glistening whiteness damp and cold. A draft of air, blowing briskly up to him, was dank and devitalized, decarbonated. It was a typical cave of the coral islands.

The negroid, faltering, was in the van; the group of constables, quietly resolute, came next, treading cautiously; Hollister and Ballin, as supernumeraries, brought up the rear. They arrived at a concrete platform by the brink of a frigid greenish pool, bordered with stalagmites of dirty yellow; over them the electric lamps shone with a chill of their own; around them hung dead silence, broken only by the sound of their own breathing and the ceaseless, measured drip from the vaulted roof. They were seventy feet underground; the atmosphere was that of the charnel-house.

One of the officers spoke peremptorily to the negroid who, ashy-pale, shuffled abjectly along the concrete path and around a promontory of putty-colored stone which, as it caught and refracted the light from above, was suddenly metamorphosed to a bank of the purest snow.

They went through a low rock-tunnel lined with sparkling excrescences and came out upon the shore of another lagoon, from which great masses of sweating limestone sloped at a broad angle to the humid roof. The air here was still more sickening, the chill more pronounced. Hollister shivered, and almost pitied Hartwell his useless vigil in the catacombs.

Up ahead the negroid was at a standstill, and as the group clustered about him, he raised his trembling hand, and indicated an alley running off to the right.

"In there," he said, in the brogueless diction of the Bermuda dorky. "In there a piece—and you'll see the boarding. The middle board's loose. It comes out—"

The officers conferred hastily. "You go on, Clarence—call out softly to him. Say you've got an important message for him. We'll be directly behind you—"

"Oh, lord!"
"Go on, Clarence! Go on, I tell you!"
"Oh, my lord!"
"Get along with you, you fool!"
The negroid, shaking uncontrollably, dropped to his hands and knees and crawled inch by inch into the alley; stopped, harkened, went on, thrust his head quickly around a projecting boss of stalagmite, and jerked it back. A second time he reconnoitered; he got painfully to his feet.

"Mr. Hartwell!" he stammered. "Mr. Hartwell!"

He beckoned to the officers. Hollister and Ballin followed, their hearts pounding. And then they were gazing at a wooden wall, of which the central portion had been removed. Behind it, illuminated by the pocket flash-light of the constables, and food scattered about, and many a shallow cavern, with blankets on the floor, candles. Of Hartwell and his black handbag, never a sign!

"Clarence—where does this lead?"

"It ain't been explored—but there's a shaft just beyond. It's a sixty-foot drop with a plumb line."

"Did you tell him about it?"

"Yes, sir. He knew it."

The leader wasn't in the least discomfited.

"Then he's left here inside of an hour," he said. "Look at this candle!" He took it up to scrutinize it. "Why—it's warm!" he exclaimed. At that moment Hollister heard a slipping, sliding sound and a heavy splash behind him.

Voices echo strangely in the chambers underground, and Hartwell, hearing voices at an unearthly hour, had made haste to desert his tiny room at the head of the unexplored shaft, and to ensconce himself where not even the negroid Clarence could expose him. Near the top of one of the banks of the glacial lagoon there was a sturdy growth of limestone standing out from the wall itself, and parallel with it. Here there was ample space for a man to conceal himself, and Hartwell seized the opportunity. While the constables were descending the steps, he had clambered along the ledge, scaled the slope, and put himself in security which should be absolute as long as he kept silent. If by any remote possibility the visitors to the cave were normal tourists, who sometimes double the fee for the questionable privilege of inspecting a cave after sunset, they wouldn't approach within a score of feet the blocked passage. If they were in search of Hartwell, he would outwit them, and after they had retreated, baffled, he could either place full trust in Clarence and wait until the hour of his appointment, or he could easily lurk in the passage until the morning, mingle with a crowd of sightseers, walk out into broad daylight and take his chances in the open. And so he had watched his pursuers, and smiled grimly.

But Hartwell lacked that final fastidiousness of care which aids in the creation of geniuses. He didn't realize that while he was impeded by a hand-bag, that bag was deserving of the major portion of his heedfulness. He couldn't rely on it to use its brains. And he had mechanically taken it with him, and after he had crouched behind the wall of limestone, he had neglected it. Accidentally, while the grim smile was at its full, he touched the bag with his foot, and although he grabbed desperately for it, he was too late by the fraction of a second. It skidded out upon the sharp incline and rushed down over the smooth surface until it splashed into the virescent water of the pool and sank. And Hartwell, who was a true philosopher in his way, smiled a little sadly and a little resignedly, and reached in his pocket, and brought out a new and adequate revolver.

He could see, through a narrow crack in the rock formation, the brim of a man's hat protruding around the corner of the alley leading to his late sanctuary. He took aim, and shook his head, and lowered the weapon. No use shooting at so indefinite an object! He grinned broadly at the rising tumult of voices; he knew that from his present location he covered the only exit from that alley. He entertained no dubitancy of the outcome of his predicament, but he was a born fatalist. And in the meanwhile—

The voices dwindled to one voice:

"There's nowhere else he could be if he is up there! The bag slid! He's behind what they call the Iceberg!"

"Try a shot."

"I don't like to do that—it'll ruin the place!"

"But if he's there, he can hold us penned in here—and he can pot anybody coming in after us. It all depends whether he'll surrender, or fight."

"Let's ask him."

"Don't be an ass!"

"Oh, give him a chance!"

One of the officers commanded silence. Then:

"Oh, Hartwell! Are you there? I want you! I've got a warrant for you! Will you come peaceably?"

Hartwell didn't reply, but it occurred to him that if he didn't, they'd surely investigate the Iceberg, now that they saw

it's possibilities. He couldn't count no more than a minute or two of immunity. He leveled his revolver, aiming through the aperture.

"Hartwell! We know you're there! Are you coming with us peaceably, or—!" The officer, waving a white handkerchief, advanced to the mouth of the alley. Hartwell fired. The constable's face took on a queer, bewildered, resentful expression; he crumpled slowly in a heap, and fell outstretched, and lay huddled on the damp cement. Presently there was a tint of salmon in the water along the causeway.

Not a sound from the alley; stillness first in the shock of surprise, then in the bitterness of faith betrayed, finally in the cold passion for reprisal. Not a movement from the alley. Between the lone man and the constabulary a dazzling, multicolored expanse of mineral beauty, and an emerald lagoon, crystal clear, save for the deepening tint of pink along the masonry.

Then suddenly Hartwell's ears were singing, and his nerves shrieked. Government had discounted the value of stalactites as against justice. Full half of the protective wall between him and the posse had melted out of existence. It went in a reverberating roar, a shower of hail, a shattering crash as of a thousand tons of glass; its fragments were slithering down the slope and tinkling into the icy pool; and Hartwell, realizing the insufficiency of his palisades, made ready for his last shot.

And then, as though timed by the gods of evil for the benefit of evil doers, the lights overhead flickered, dimmed, flared up once, and slowly, slowly went out. It was twelve o'clock. The men in unfashionable clothes had also forgotten a trifling detail. The power company shuts down at midnight.

Hartwell stood up in the darkness, and felt his way to the extreme limit of the narrow shelf on which he had lodged himself. He knew that he was now nearly opposite the mouth of the alley, and his lips curved pleasantly. At the first glimmer of a pocket torch he fired point-blank, and at the yell of pain which followed, he sat down, chuckling quietly to himself, and worked slowly toward the edge of the lagoon. Bullets spat viciously around him, but high—three or four feet high. The remainder of the Iceberg went out in a thunderous explosion, and Hartwell was in the midst of an avalanche of splinters and bits of stone, and a spray of molten lead. The air had sulphur in it and biting fumes.

It was his intention to gain, if he could, the cement walk, to climb the stairs, and to make his dash for liberty through the guards on the outside. There would be few sentinels, if any, and probably they would be unexpectant.

So that he crawled gingerly along the sides of the slope a yard or two, crouched and fired at the flash of powder across the lake. It was a good hit. Hartwell winced as a bullet flattened itself pariously near his head; he ducked and scrambled rapidly along the ledge by which he had surmounted the hill of limestone.

Footsteps reverberated near him; the officers had separated, to throw a cordon around the lagoon. Hartwell wriggled forward another yard, lost his hold, slipped—and was flat on his feet on a hard pavement. He had outflanked them! The next instant a ray of golden light grazed his face, and he fired twice at the center of it, and turned to run—and was struggling in the grasp of a vigorous and powerful man.

In his own way, Hartwell was philosophical. His regret at this epochal encounter was that his plans had miscarried. He had coolly resolved to inflict as much damage as he could, and to deny to any adversary the glory of taking him alive. He knew that he should never permit himself to be captured; he knew that he should never investigate a prison from the inside. He had never sincerely expected to escape—not since he had heard the voices in the cave at night. But he had counted on carrying out his plans. There was, however, a heaven-sent occasion to account for one more constable. His ambition riveted itself upon this last accomplishment.

As he grappled with his agile opponent, he was blinded by more light, and deafened by the shouting from many throats. He recognized the distorted features of the man who was wrestling with him. He laughed harshly. Hands were striving eagerly to pinion him. Hands were reaching for his windpipe; hands were waylaying and tripping him. He was surrounded, trapped, doomed.

In his way, Hartwell was a stoic philosopher. His right arm swung free for a critical instant; he had his choice—to



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Spill this "hump" question first time you're in a bunch of live ones—if you want to see fur fly! Never heard such a wind-jamming squall in my life as tonight when I passed it to our crowd! You know Betty Ellen Jones. Well, she said a dromedary was a he-camel hunting a date in the desert! And, Betty's "Vassar, '20"—rah, rah! All right, Betty!

All you've got to do is dig out your deck of Camel cigarettes. That "bird" out front clinches the argument—*apparently*—but!

In the classic language of bigger business circles—"you tell 'em Cricket, Katy did!"

Report your luck quick. Try it on old Jig Jones! And listen, Peter. I'll shortly slip you some smoke news that'll make Jake's ideas rattle like a tin can tied to a towser dog's tail! *S'long!*

Yours for warm socks
next winter!

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account for one more of his enemies, or to carry out his plans for himself. He couldn't do both. His act was instantaneous. The muzzle of the revolver went to his forehead. He said—grunting in the excess of his strain—he said, as he brought the weapon to his temple: "You win—Phil—good luck!"

And pulled the trigger.

CHAPTER XXVIII

In the smoking-room of the *Devonian*, Peter Kirby was busily demolishing the wanton exaggerations of a passenger who hadn't realized the small man's antipathy to war liars; while Mr. Cloud, taking his fun where he found it, was rapidly puffing a fat cigar in benign certainty that when he bugle blew he wouldn't be on deck anyway, so that he might as well enjoy himself while he could.

In two steamer chairs on the promenade deck, Ballin and Miss Rexford were talking animatedly. Any keen analyst might have observed that Miss Rexford was forcing her gaiety, and that Ballin was singularly diffident about meeting her eyes. In fact, he was charmingly boyish about it, and palpably shy.

Hollister and Ballin's cousin were leaning against the starboard rail, looking southward, when they weren't looking at each other, and causing feminine passers-by to exchange nudges and theories.

"Remember what Tennyson wrote? Let's paraphrase it," said Hollister, sighing profoundly.

"There lies a terrace in Bermuda, lovelier Than all the valleys of Ionian hills."

Ballin's cousin nodded approval.

"It's so beautiful and colorful," she said. "Every time I see it I'm thrilled all over again. And no two people ever loved it as we do."

Hollister extended his arm toward a curved harbor of cobalt blue.

"We're opposite Bailey's Bay—doesn't it seem to you that we're leaving it much too fast? We didn't come in at any such pace as this!"

Ballin's cousin laughed.

"I always say that, Phil."

Hollister ventured a glance over his shoulder.

"Wouldn't it be funny if Ned and Edith—"

"Not funny at all! She's a darling, Phil! She's just been—different. And—there was Mr. Hartwell. He fascinated her."

"True—true," he granted. "But Ned deserves a princess in disguise. He's had a tough time of it."

"I wonder," she said gravely, "how it would all have come out if Ned had dared to tell me at the very first."

"Don't think of it! I probably shouldn't have met you!"

"Or if Ned hadn't written that advertisement—"

"I should have starved genteely," said Hollister, "until the day before yesterday. As it is—well when the Exchange has opened, and I'm going back to an office managership and a church wedding, I can't see that I've got anything to complain of!"

They watched the mail-boat darting out to them from St. George's; they watched the mail-boat tacking behind them on the swell. Ballin's cousin tucked her hand in crook of Hollister's elbow.

"Honestly, Phil, dear—you hadn't begun to care when—when you congratulated me—on the way down—had you?"

"Long before that."

"When?"

Hollister smiled at her.

"Haven't I told you sixteen million times?"

"You haven't told me *this* time."

"Well—up at the Aspinwall."

"Lots—or just a little?"

"Just a little?"

Ballin's cousin squeezed his hand.

"And then—after that?"

"On board ship."

"Lots—or just *fairly* lots?"

Hollister feigned difficulty in recalling the truth.

"Just fairly lots."

"And then—"

"Our first walk to Fairyland."

"Much?"

"Very much."

"But not—you weren't sure?"

"N-no, dear—"

"When were you sure?"

"After I came back from walking with Edith that same day."

"I like that," said Ballin's cousin happily. "When you could come from kissing another girl—and know by that that you cared for somebody else—I like it."

"And when," he demanded, "were you sure?"

Ballin's cousin made calculations.

"Four hours before I ever saw you," she said.

"What?"

"Because Ned told me *all* about you," said Ballin's cousin.

At length he turned to her with vested authority.

"Run down and get your sweater, dear," he said. "It's too cool for you. I'll go with you as far as the companionway." He went for a purpose; the companionway was generally deserted. In the shelter of the stairs she lifted her face to him, and he kissed her.

"Excuse me!" That was Kirby, assisting the limp and dejected Mr. Cloud to the cabins. "Brace up, Colonel—now for one short mad dash, and Quebec is ours!"

The coast clear, Hollister kissed her again.

"Hurry, 'Cesca—we'll watch it out of sight."

"How c-can I hurry?"

So that he liberated her unwillingly, and as she sped forward to her stateroom, Hollister went on deck, and, pausing to light his cigarette, spied Ballin and Miss Rexford. They had reversed the order of their procedure. It was now Miss Rexford who kept her eyes to her lap.

Hollister sighed cheerfully, and went to his favorite location at the rail. The sun was setting; the low-lying islands were relentlessly defined against a sky of piercing blue. Here and there among the trees a slash of white gleamed through the riotous hues of pionciana and poinsettia and rose. The sea was incredibly berry and malachite and purple and azure; out of it Bermuda sprang like a vision of the lost island of Atalantis, an enchanted isle whose Caliban had gone forever.

Hollister impulsively took off his cap, held it a moment aloft, replaced it. It was a quaint tribute to the memory of Caliban, who without doubt had been a philosopher in his way—and had added "good luck" to the acknowledgement he had once said, in triumph, that he should be brave enough to make, in defeat.

"Good luck to you, Jim!" said Hollister to himself. "Wherever you are—*Glück auf!* But you sure did make a peck of trouble while you lasted!"

He tossed his cigarette over the side and turned with shinning eyes to the girl who held her own to his as she crossed the deck to meet him.

"My!" said a passing eight-day tourist to her stout friend in a traveling gown of cerise silk and black braid: "Look a' them lovers! Nobody else in the world as far's they know. Honest to goodness, Mame, when you get right down to it—ain't nature wonderful?"

THE END

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I NEVER could understand why they always pictured Justice blindfolded until after I had served on a jury.

THE old gray mare may not be what she used to be, but if she still does her "durndest" she is filling the bill.

THAT old man down in Ohio who claims to be one hundred and thirty-four years old and is suing his wife's people for the custody of his six-year old son certainly can take a joke.

IT is a wonderful thing to be able to come from a long line of ancestors who did great things in their day, but, brother, it is poor stock in trade to depend on your ancestor's reputation to bring you the necessary bacon.

THE Good Book says the Lord will provide, but that doesn't give you the right to sit on a split bottom chair and wait for the Lord's delivery boy to bring it to the kitchen door.

SOMEWHERE in the marriage ceremony it says, "Cleave ye one to the other," but in the absence of the cleaver some men get the idea that a kick in the ribs answers the same purpose.

GOING to church, slipping a thin dime in the "jack pot," and sleeping through the sermon doesn't entitle you to a drawing room on the Heavenly limited.

THE Arabs have a saying that every man is the moulder of his own destiny and his fate hangs around his neck. So you had better not deal the cards from the bottom of the deck in the game of life.

THE late Joselito Gomez, a toreador who died leaving an estate of half a million dollars, has exemplified the fact that sometimes it pays to "throw the bull."

IF brother Noah on his famous trip on the Ark had sent out a woodpecker instead of a dove, and that woodpecker had located a good old dry tree to work on, the chances are Noah's landing would have been delayed considerably.

WHEN I was a young man it used to make me sore because my old man kept tabs on me and tried to keep me in the straight and narrow. I thought he was an old grouch and had it in for me. I have changed my mind. I am married and have boys of my own.

I HAVE had lots of mean things said about me and to me, but this is the worst ever: I was out hunting with a fellow and kept missing the birds. Finally he got so disgusted with me he told me I couldn't hit an elephant's rump with a base fiddle.

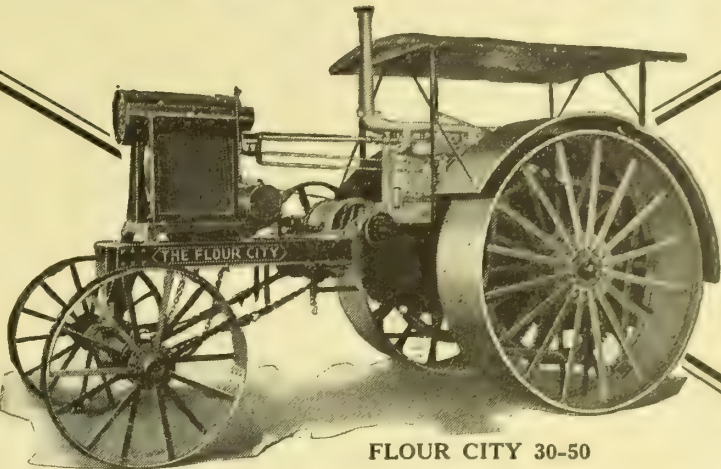
SOME people walk all over a good living looking for a job. Grab hold right where you are, it's there. It's a long, long trail to the end of the rainbow and since no one has come back and reported, it must be that pot of gold has already been "copped" off.

THE next time you see a successful man, instead of wishing you were in his place, take a hitch in your suspenders and tear into things, and the chances are you will finish in the same class. Simply wishing won't get you any place.

NOTHING is stronger than its weakest part. A small cog in the smallest pinion wheel, if broken, puts the whole machine out of commission. So remember if you can't be the big part of the machine you are just as important as it is and do your work accordingly.

T. P. SHONTS was a very wealthy man, married and had children. He did some magnificent things in his life, but in the course of human events he met his "dear friend Amanda," and when Mandy got through with him he was "picked" as bare as a young jaybird. Wife and daughters got but very little of the several millions. Amanda got the "jack" and T. P. got a bad smell attached to himself. Brother, if you pesticate, blooey, blooey.

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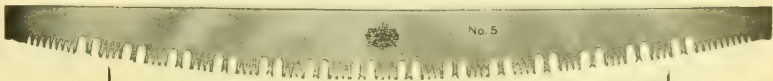
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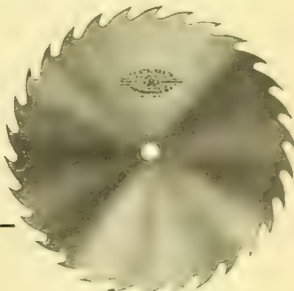
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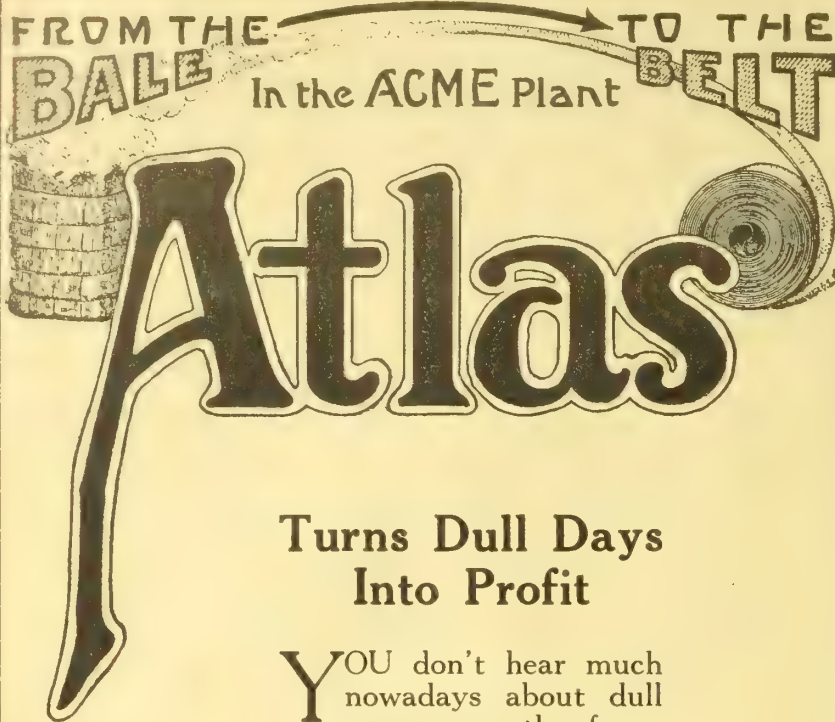


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Turns Dull Days Into Profit

YOU don't hear much nowadays about dull seasons on the farm. There's always something to do. First it's one thing—then it's another. And most always it takes belt power to do it with.

Belt work plugs up between-season dullness. It's the best little "fill-in" the farmer has.

After the threshing is done, then there's corn cutting, baling, grinding, shredding, sawing, stone crushing—a very busy program of productive work that keeps him going until spring.

You should know the true economy of Atlas Canvas Belts. You should know how much better work you get out of them, how much more wear, how much more satisfaction. Their trouble-free performance spells economy. You should know and try Atlas. For until you do, you're passing up the best "buy" in farm belts.

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FARM BELTS

Mention The American Thresherman and Farm Power

Ten Years Behind the Throttle

(Continued from page 9.)

crease this wage very materially.

Fletcher has to buy some things that the average farmer sometimes forgets. He has a new belt which cost him one hundred and forty-five dollars. He bought his old belt (almost identical with this) in 1915. It then cost forty-two dollars and fifty cents. In other words, this replacement cost over three times the amount it did a few years ago. The same is true of many repair parts.

Fletcher was the first man to introduce the weigher as the thing to determine the amount of grain threshed. In fact, for years he was the only thresherman in his section to use the weigher. Last year oats were light and several custom men claimed that by the weigher they lost money; but Fletcher has used it from the first.

One might think Fletcher would do a better business with each year. Not so. In 1911, he went northeast of Rockford and added another run to his regular run. The season had been very wet. Threshers seemed unable to do all the work. That year Fletcher threshed sixty-five thousand bushels. He hasn't equalled this record since.

All grain in the Rockford section is threshed from the shock. Nearly all of it is stored on the farms, being fed throughout the year. The wheat problem, after threshing is done, often presents a transportation problem. This is true in the Dakotas, Kansas and Oklahoma. Fletcher estimated that less than ten per cent of the grain in his section was wheat. There was more barley than wheat, as farmers find barley valuable for

hog feed. Over eighty per cent of all grain is oats. Dairying is becoming the farmer's greatest source of steady revenue, and all oats and barley are used on the farms that raise them.

Fletcher figures little depreciation in his threshing costs. He doesn't have to. Instead of buying a rig or time, or from the first dealer he met, he "shopped" around until he got the outfit he wanted, and then he struck a good bargain.

If Fletcher had said he bought his steam engine last year, I would have believed it without a question. It runs perfectly, its new coat of paint hides all signs of age.

He bought this 24-horse power engine in 1912. It was listed at \$2600 and was practically new. Fletcher had a good engine of well-known make, which he valued at \$1000. After some offers and counter-offers, he gave his old engine and \$1000 cash for his present engine.

He bought his Illinois-made separator the same year. Going to Peoria, he found a rival company, located in another state, had taken this 36x60 in trade. It was practically new and listed at \$980 at that time. The dealer discouraged Fletcher, saying this machine had been unsatisfactory. Fletcher said under the circumstances he could offer but \$600. The dealer accepted, and Fletcher came home with exactly the sort of separator he wanted.

He bought his outfit at the right price and he keeps it in good shape. His customers are not paying for war-time machinery prices and repairs. This helps to explain that unbroken record: ten years behind the throttle on the same old farms.

Filling the Silo Is Hard Work

(Continued from page 10.)

There has been more or less controversy as to the number of men required in the silo, some saying it is not necessary to tamp the ensilage at all, while others say it must be thoroughly tamped. In our silo we have used but one man: again we have had three men in the silo. In both cases we have had satisfactory ensilage. The reason for tamping the ensilage is to exclude the air and to get more material into the silo. Whenever a patch of spoiled ensilage is found in the silo it is a sure indication that the corn was not properly tamped and a pocket was formed which admitted air. Therefore it is important that the corn be carefully distributed in the silo by keeping the edges higher than the center or, in other words, leave the center hollow, as the heavier particles of corn will settle in the middle and the lighter portions will be blown to the outer

edges. Hence the importance of thorough distribution.

The modern ensilage cutter has what is known as the distributing pipe but, in the absence of this, a man with a manure fork can scatter the ensilage satisfactorily.

In some sections we have what is termed the silo ring. By this, we mean that a few farmers have gone together and purchased their own silo-filling machinery. When the time comes to fill silos, they use their own outfit and each farmer helps the other members fill their silos. In this way they get their silos filled, usually in good time, and know right where to go for help. If it so happens that some member can not go to help his neighbors, he sends some one in his stead and pays the bill. In our section several such rings exist and they seem to be quite satisfactory.

Silo filling will be made easier if the corn field is near the barn. Of course we appreciate that, with crop rotation, it is not always possible to have the field nearest the barn in corn; but we say it may be planned at least every third year. On some farms, a field near the barn can be planted each year to corn.

The farmer will profit materially by making proper preparations for filling the silo. He will keep down expenses and have a cheap stock feed throughout the coming winter.

Farmers Discuss Truck Possibilities

(Continued from page 11.)

we have the views of those farmers who are using trucks. Each of these farmers was asked regarding the size of truck he now uses and also as to the size he would buy if he were to do it again. "We find in our analysis that farmers farming a hundred acres, and under, have a very marked preference for the one-ton truck at the present time," says Mr. Pettit. "That, however, does not include the farmers farming one hundred and one to one hundred and sixty, one hundred and sixty-one to two hundred and forty, and the larger sized farms, for we find a uniform use of one-ton trucks throughout the section. We also find the same thing applied to the ton-and-a-half and two-ton with a fairly keen interest at the present time in the purchase of less than one-ton and greater than two-ton trucks. But what will they buy the next time?

"We find in the size of the next truck—as was the case of those who had not yet bought trucks—relatively less interest in the truck of less than one ton. We find quite a conspicuous interest in the one-ton, ton-and-a-half and two-ton trucks. That probably is due to the fact that the farmer is accustomed to haul by horses about a two-ton load. We find also quite an interest in proportion in the over two-ton truck, but probably it is safe to say that the majority of the trucks from now on will be in the ton, ton-and-a-half and two-ton class."

A Parody

The Ford is my auto; I shall not want. It maketh me to lie down in muddy roads; it leadeth me into much trouble. It draweth on my purse; I go into the paths of debt for its sake. Yea, though I understand my Ford perfectly, I fear much evil for the radius rods of the axle might break. It has a blowout in the presence of mine enemies. I anoint the tire with a patch, the radiator boileth over. Surely this thing will not follow me all the days of my life, or I shall dwell in the house of poverty forever.—Fidelity Spirit.



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USE Champion Spark Plugs to cut truck costs.

They aid greatly in profitable, continuous truck operation, by ending many of the costly delays for repair and adjustment.

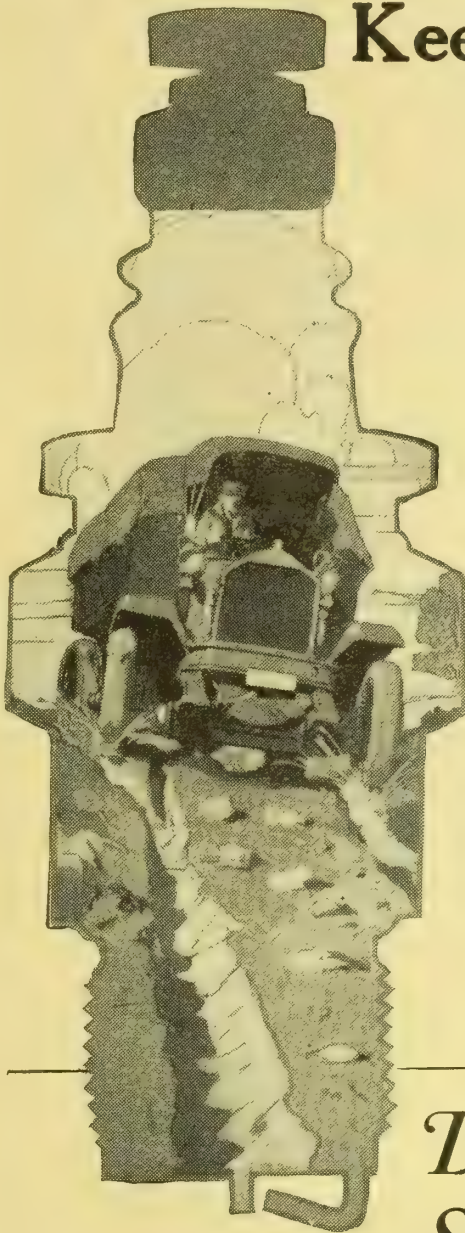
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Organization

THE threshermen of northern Kentucky held a meeting and barbecue at Owensboro, Kentucky, on August 7, and the threshermen from far and near gathered at this meeting. The arrangements were perfected by Fred W. Horlander and Lynn Williams. Both of these men are boosters in the Kentucky Brotherhood of Threshermen and they are president and secretary of the Davies County organization.

Early in the morning the threshermen and the farmers began to gather from all directions. Of course it is unnecessary to say that Joshua Bohannon, the president of the Kentucky Threshermen's Association, was one of the first on the ground. This was a genuine old fashioned barbecue in every sense of the word. Four animals were killed and the meat was roasted over the fire in true Kentucky barbecue style. The cook was John Winks and he certainly is an artist in cooking barbecue meat. To a tenderfoot who has not been in the habit of attending these gatherings, the experience was entirely novel indeed.

The first impression from the odor of the cooking meat was that it would not be fit to eat after it was prepared, but just as they were finishing the cooking, they applied a lotion consisting of lemon, lard, vinegar, salt, pepper and a new ingredient that the writer does not know; and the result was the best meat from every viewpoint it has ever been our pleasure to taste. It would put the best porterhouse steak from the highest class restaurant entirely out of the running.

After everyone had eaten until he could hold no more, speeches were made by the various members present. The principal address was given by Joshua Bohannon, the president of the Kentucky Association. A short response was made by the writer as president of the National Association of Brotherhood. After a full round of pleasure, the threshermen of Davies County adjourned, satisfied with having pulled off the best entertainment they have had in many years.

W. H. NEWSOM.

Hack Saws and Cutting Pressure

ONE of the most important factors in efficient cutting with a power hack saw machine is the maintenance of the proper pressure on the blade during the whole of a series of cuts. Failure among hack saw users to realize this fact causes an enormous waste of blades and time—a waste far greater than is generally supposed.

"The maximum of efficiency," says "Hack Saws and Their Use," a new book published by the L. S. Starrett Company, "is to be found in the saw that cuts quickest and lasts longest; that combines cutting efficiency with endurance. The ability to cut in the shortest time is but one of three objects that determine the value of a hack saw, and, therefore, when time only is considered of value, the chances for a loss of efficiency are exactly two out of three."

"The effect of the regulation of weight on the time per cut is clearly shown in a test made to determine the results of various pressures on a number of blades."

"In this experiment a new blade was properly placed in a hack saw machine, a piece of three-inch machine steel put in the vise, the weight set at twenty pounds, and a cut was made. The time required was thirty-five minutes. Another blade was then placed in the machine, the pressure increased to twenty-five pounds, and another cut made. The time required was thirty minutes.

With thirty pounds weight, a new saw completed the first cut in about twenty-four minutes. Another saw was inserted, the weight increased to forty pounds, and the time of the first cut was reduced to fifteen minutes.

"The next increase was to forty-four pounds, which is the weight recommended for this particular saw, and a new blade made its first cut in eleven minutes and thirty seconds which is slightly better than a good average time for a first cut on this size and class of material. The weight was then increased to fifty pounds, and, subsequently, in increments of ten pounds, to seventy pounds, a new blade being used each time, and the time of the first cut noted."

"While the time per cut continued to decrease as the weight increased the saw in each case was actually cutting at a destructive rate when the weight was increased beyond the amount recommended for that particular blade. Had any of the saws used been tested for the number of cuts per blade and general efficiency it would have been seen that when the weight rose above seventy pounds in the first cut, the life of the saw was considerably shortened."

"While a hack saw must be made to withstand a great amount of abuse there are, nevertheless, limits beyond which it will not go; and where a saw is forced to cut under a greatly

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30x3½	7.00	2.00	33x4	9.00	2.75	35x5	13.00	3.60
31x3	7.25	2.10	34x4	9.25	2.85	36x5	13.25	3.70
32x3	7.50	2.25	34x4½	10.50	3.00	37x5	13.50	3.75
31x4	8.50	2.50	35x4½	11.50	3.15			

Send \$2 deposit for each tire and \$1 for each tube ordered, balance C. O. D. Tires shipped subject to your examination. State whether S. S., C. L. (Q. D.) plain or N. S. is desired. All same price.

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CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

excessive weight, the user must decide for himself whether or not the gain in time per cut offsets the loss in saws, spoiled stock, etc.

"On the other hand, mere endurance without cutting effect, as exemplified in a saw that is worked too 'gingerly' does not represent efficiency."

In a test to determine the results of insufficient pressure, the conditions were exactly opposite to those of the preceding experiment. A weight was applied in each case which was considerably less than that recommended for each particular blade used in the test.

"Not only was the time per cut far in excess of what should have been required to cut the class of material of which the test was made, but the life of the saw was destroyed almost as rapidly as when too much weight was used. The teeth of the blades were destroyed by slipping and sliding over the work, rather than by cutting.

"These results make it evident that using too little pressure is almost as inefficient and costly as using too much, while the practice of using insufficient pressure has not even the doubtful advantage of saving time at the expense of the blade and stock, as is the case where too much pressure is employed. Between these two extremes lies the happy mean which represents the acme of hack saw economy.


"The actual pressure in pounds per square inch of 'contact area' of the tooth, which has been found to give the most satisfactory results as regards both the time per cut and the number of the cuts per saw, varies from twenty to thirty pounds. It has been determined by careful tests that pressures within these limits, while not overloading the saw, are sufficient to avoid any possibility of the blade slipping and sliding over the work, and thereby becoming dull without having done more than a portion of its rated capacity. It has also been found that the basic weight or pressure is directly proportional to the gage of the saw. Standard practice indicates using the twenty-pound unit of pressure for blades not over 0.040 inch thick, twenty-five pounds for saws 0.040 inch and over.

"This so-called unit or basic pressure must not be confused with the weight actually resting on the blade when in use, but must be taken as a constant, by the use of which the actual pressure on the saw may be calculated. This weight, or pressure, is measured by attaching a spring balance to the forward end of the saw frame, when the blade is in mid-stroke, and lifting. The amount of pull indicated by the needle of the scale is the weight on the blade."

A workman, using a hand frame, almost instinctively bears harder upon the blade as the work progresses and the teeth lose their first keenness.

THE HUMANE Extension Feeder

(Patent Applied For)



AFTER running my own Thresher for fourteen falls and watching the boys trying to get the long stacks into the feeder, I decided I would put ten more feet on my already 20-foot feeders and build the sides higher. They save two or three men and one will pay for itself in twenty days. The sides, being 20 inches high, makes them wide on top and keeps the wheat from going over. The 18-inch bow makes them 18 inches lower in the middle and keeps the lower end three feet higher off the ground than if it were straight. We balance it on two wheels and put a 2x4 from each wheel to the hook in front by which to pull the feeder. By having two tongues there is no strain on the feeder when a wheel goes into a hole or strikes a bump. There are handles for three men at the front end. They can take the feeder anywhere.

Our 30-foots are Humane Feeders. The dirty machine can be left back from the stacks and pitchers do not have to work in the dust, besides having low, easy pitching.

Our straight feeders are made to meet a demand for a cheaper feeder, but we use our patented ribs, renewable floor, side rails and truck design. The bowed feeders are made in two sections, for convenience in shedding and shipping.

Humane Extension Feeder Prices

Bowed Extension Feeders	Straight Extension Feeders
30-foot, 20-inch sides.....\$200.00	16-foot, 13-inch sides.....\$130.00
26-foot, 20-inch sides.....\$187.50	20-foot, 13-inch sides.....\$140.00
22-foot, 20-inch sides.....\$175.00	

Above prices include sideboards for stub feeder, drive chain and sprockets

Manufactured by
E. D. RICHARDSON
Cawker City -:- Kansas
Write for Threshers' Supply Catalog

This same principle of gradually increasing the pressure after the first few cuts must be applied to the power saw if efficient work is to result.

"No matter how nearly correct the weight is at the outset after a certain number of cuts have been made, the pressure must be increased not only for the sake of reducing the time per cut to a point within the limits of efficiency but also to prolong the life of the saw."—

From "Hack Saws and Their Use," published by The L. S. Starrett Company, Athol, Massachusetts, for free distribution.

Millions of dollars are lost annually due to the deterioration of the quality and waste in handling improperly stored oils.

The Vogue in Separators

Several Wisconsin dealers were recently asked what size of separator was proving most popular during the present season.

The local Case dealer said that the 26x46 separator had been most strongly in demand. The Nichols & Shepard salesman told us that the 28x48 had been his best seller.

This tendency to use small-size separators in sections where the grain acreage is not so large has been appreciated by the Avery Company, of Peoria, Illinois. They are adding to their line of "Yellows" a new size, 28x48.

This new model is a two-bundle machine equipped to feed all kinds of grain without slugging the cylinder.

The company has already produced a number of these machines. As you visit the fairs, keep your eyes open for this small-sized addition to the Avery family.

A small boy, who was sitting next to a very haughty woman in a crowded car, kept sniffing in a most annoying way, until the woman could stand it no longer.

"Boy, have you got a handkerchief?" she demanded.

The small boy looked at her for a few seconds and then, in a dignified tone, came the answer:

"Yes, I 'ave, but I don't lend it to strangers."

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COSTS so little no one with wood to cut can afford to be without it. Will saw your winter's wood in a few hours. Does all practical work any other saw rig can and makes unnecessary the expensive, cumbersome rigs used in the past. For a small part of their cost you can now own the

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The style illustrated here is especially constructed for engines with flat drawbar. It is made for three sizes of bars, 3/4x 2 1/2, 3/4x3 and 1x4 inches.

Drawbars of other sizes than these can be made to fit with a little help from your blacksmith.

This is but one of the many different styles—there's a Buller Automatic Coupler for every engine.

Illustrated catalog with full description and prices will be mailed on request.

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Boys and Girls

Languages

BY HANNAH G. FERNALD

I have a little neighbor whom I very often meet. He wears a coat of reddish fur at home and on the street. We often stop to have a chat on sunny wintry days. His manner's very pleasant—but I can't tell what he says.

I think he talks about the woods, and how the beechnuts taste. And how he loves the bread-crusts that I'm rather apt to waste. And how he wishes spring would come—but there! I must confess I cannot understand a word, and so I have to guess.

My sister studies German and my brother studies Greek. But those are not the languages that I should care to speak. For none of all their lexicons can make it clear to me. Just what that little squirrel means by "Chk!" and "Chir-r!" and "Chee!"

The Story of the Clock

BY CARRIE S. NEWMAN

"Come, Betty," said Mother, "put away your dolls. It is time for bed."

"Oh, mamma," pleaded Betty, "I don't want to go to bed yet. I'm not a bit sleepy."

"But, Betty, look at the clock. The hands are pointing to seven and you know that is bedtime."

"Horrid old clocks! I wish they'd all stop and never go again," muttered Betty as she tucked Matilda Jane and Josephine into the carriage in which they slept.

"Tick-tock, tick-tock," sounded the dining room clock in the night, and in the quietness its voice seemed to grow louder and louder.

"What's the matter?" inquired the kitchen clock from its shelf. "You seem to be angry."

"Didn't you hear what Betty said before she went to bed? I think I'll stop and see how she likes it."

"Well, if you stop, I'll stop," answered the kitchen clock.

The tall grandfather's clock in the hall paused to listen to the conversation. "If they are both going to stop, I'll stop too. I am quite tired ticking day and night and would like a rest."

Betty opened her eyes. How quiet the house was! But it was quite light and must be time to get up. She tiptoed into mother's room. Mother was wide awake, but still in bed. "Isn't it time to get up?" asked Betty.

"I don't know, dear; the clocks have all stopped."

Betty dressed and ran downstairs. No breakfast ready. "You see I didn't know what time it was. All the clocks have stopped," explained Hannah.

When Betty had finished her breakfast she put on her hat and ran down the street to call for her little chum, Pearl, to go to kindergarten.

"Why, Betty, you are very late," said Pearl's mother. "Pearl has been gone some time."

Betty hurried down the street. Not a child in sight. No one on the

playground. She crept up under the window and listened, then turned and ran home, the tears trickling down her cheeks.

"I'm sorry, little daughter," said Mother, "but I had no way of telling the time."

"Do you think it's anywhere near one o'clock?" asked Betty a few hours later. "You know, Uncle James promised me a ride if I came at one."

"You'd better run over and see," said mother.

But alas for poor Betty! She ran around the corner just in time to see Uncle James disappear in the distance.

"Betty, Betty, wake up!" and Betty opened her eyes to find her Mother standing by her bedside.

She sat up and listened intently, then threw her arms around Mother's neck, exclaiming, "Oh, I'm so glad it was only a dream!"

And before she ate her breakfast Betty crept over to the clock and whispered: "I'm sorry I called you names. I'll never do it again."

From Our Boys and Girls

DEAR AUNT JANE:

I am a girl of nine years and am in the fourth grade at school and I have a mile and a half to walk to school. My papa takes The American Thresherman and Farm Power. I enjoy reading the Children's Page. My papa has a Rumely tractor, a steam engine and a Redfield threshing machine. I have no sisters but have two brothers. Their names are L. J. Custard and Hugh Roscoe Custard. For pets I have a little dog named Snipper, a kitten named Blacky, a little calf named Teddy, and two ponies, one named Flossy and the other named Babe. I have two hens setting and four chickens and four guineas. Must close for this time, hoping to hear from some of your members and hoping to see this in print.

Your niece,
INEZ CUSTARD.

Willow Lakes, S. D.
(I hope the hens hatched nicely.—
AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a girl twelve years old. I am in the fifth grade. I have to go one and one-half miles to school. I have three brothers and one sister. My brothers' names are Glenn, Harold, and Norris. My sister's name is Gladys. My brothers have a calf they hitch up to a cart and ride on the cart. I will send their picture sometime. We have only taken The

American Thresherman and Farm Power two months. I like to read the Children's Page. Papa has two engines. One is an Economy and the other is an Acme. He also has a Moline tractor. Mamma has a "Successful" incubator.

Your niece,
IVA OVERMEYER.

Fisher, Ill.

(I am looking for the picture, Iva.)
—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl nine years old and my papa takes The American Thresherman and Farm Power. My papa has a threshing outfit and a sawmill with a big log turner. My papa calls it The Nigger. You just ought to see it turn the big logs for him. We have an automobile. I have one sister named Myrell. She is thirteen years old. We have a piano, banjo, violin, graphophone and ukelele.



Oscar Gardner and His Calf.

This is a picture of Oscar Gardner and his pet calf. Oscar belongs to the Calf Club of Benton County, Arkansas, and intends to take his calf to the County Fair. It weighs one hundred and sixty pounds and is but two months old.

For pets I have four chickens. We have a dog and her name is Bird. We have a little new calf. It is black and white and I think we will call it Bobby.

IRMA HANSEL.

Tutzville, Pa.

(Can you play on any of your musical instruments, Irma?—AUNT JANE.)

DEAR AUNT JANE:

May I join your merry circle? I enjoy reading the Children's Page. For pets I have two cats whose names are Blacky and Fluff. I have a bottle and nipple for Fluff. She likes to nurse the bottle. Our school is closed for two weeks. Papa has five pigs. We have seventeen cows. I like to read the stories Aunt Jane

writes. My teacher is Miss Brewer from Madison. I have one brother and one sister. My papa takes The American Thresherman and Farm Power. We have three engines. I have missed two days of school on account of the chickenpox.

Your niece,
BEULAH POTTS.

West Lima, Wis.

(I am glad you like the "Aunt Jane" stories, Beulah.—AUNT JANE.)

DEAR AUNT JANE:

I am a boy fourteen years old. My birthday was the fifteenth day of March. I am making my home on a farm of one hundred acres. Mr. A. E. Fisher is the man with whom I live. He owns a Reeves outfit. I formerly lived in the city but I think farm life is the best. For pets I have a big collie dog named Billy, and a colt whost name is Minnie. I go to schoolevery day. My teacher's name is Miss McDaniel. I have two brothers and one sister. They live in town and they like to come out in the country in the summer time. My brothers' names are Earl and Richard. My sister's name is Pearl. I like to read the letters in The American Thresherman and Farm Power. I hope to see this in print.

Your nephew,
CLEMENT BATEMAN.

Orient, O.

(I am glad you enjoy country life, Clement.—AUNT JANE.)

DEAR AUNT JANE:

May I join your merry circle? I am a little girl eight years old. I am in the third grade. I love to go to school. I have one brother whose name is Erald. I am sending you his picture which I hope to see in your paper. He is two years old and he is some boy. My papa takes The American Thresherman and Farm Power. He has two Huber threshing outfits, one Rumely clover huller, one Whirlwind ensilage cutter and a sawmill. We also have a Tin Lizzie, and a three-ton Service truck and large Advance corn husker. This is my first letter and if it does not find the waste basket I will write again.

Your niece,
VELMA GIBSON.

New Carlisle, O.

(Did you forget to enclose the picture, Velma?—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am going to common school yet and am in the eighth grade. I have three sisters and four brothers. I have four nieces and two nephews. My nieces' names are Mildred Jolliel, Edith DeLay, Mildred Gardner and Leora Gardner. My nephews' names are Wendell Jolliel and Hugh Gardner. I have a brother going to the University of Missouri. My baby sister will be twelve years old in



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December. I live on a farm. We have ten cows and four horses. I have three pets and four chums in school. We have only twelve girls and twelve boys in school. My oldest sister lives in Indiana. She is Mildred and Wendell Jolliel's mother. My other sister lives in Kansas. She is Edith DeLay's mother. My two married brothers live here. Harry is Mildred Gardner's father and Claud is Hugh and Leora's father. I am sending a picture of my youngest brother and his club calf. I will close hoping to see this letter in print.

Your niece,
VIOLA GARDNER.

Garfield, Ark.

(Thank you for the picture, Viola.—AUNT JANE.)

DEAR AUNT JANE:


As I never saw any letter from this part of the state, I thought I would write one. I am a little girl ten years old. My father has taken The American Thresherman and Farm Power for eighteen years. I enjoy reading the Children's Page. We live on a farm of one hundred and sixty acres. My father and his brother own a threshing outfit. He also owns a tractor. We have a Hup auto and I enjoy my rides in it. I have three sisters and two brothers. My sisters' names are Mildred, Charlotte and Opal. My brothers' names are Frances and Paul. I will send you a picture of my youngest brother and sister. You can publish it if you wish.

My sister Mildred takes lessons on the piano and also gives myself and sister Charlotte lessons. I will be in the fifth grade at school this winter.

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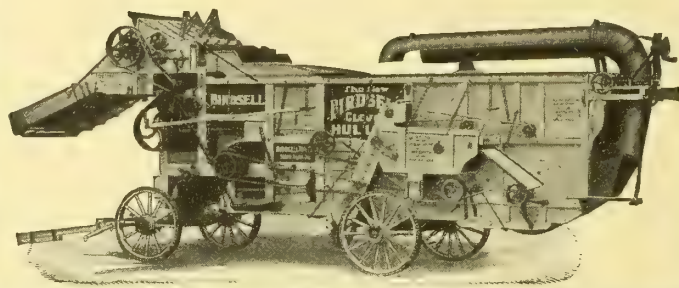
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Mention The American Thresherman and Farm Power

My sister Charlotte will be in the fourth grade. She is eight years old. Francis is fourteen years old and will be in the eighth grade. Paul will just start this winter. Mildred is sixteen years old and will be in the second year of high school. I will send you my and my sisters' picture next time I write, if this letter is published.

Your niece,

BEATRICE CASTERLINE.

Van Buren, Ind.

(I have a picture of a dear baby, in a white dress and white bonnet, taken at the corner of a house. There is no name on the picture. Is it one you sent, Beatrice?—AUNT JANE.)

DEAR AUNT JANE:

I have not seen any letters in the paper from this part of the country so I thought I would write. I am eleven years old and I am in the seventh grade. My brothers have a Reeves threshing outfit and also a Ford. We have a Maxwell. For pets I have a dog and two cats. The dog's name is Curly and the cats' names are Tommie and Blackie. As my letter is getting long I will close, hoping to see my letter in print.

Your niece,

ALBIRDIE PIERSON.

St. Hilaire, Minn.

(Here is the "hoped-for" letter, Albirdie.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a little girl eight years old. I have one sister ten years old, two brothers, Francis, four, and Harris, two. We have a Harvard wagon and have great fun with it. My papa takes The American Thresherman and Farm Power. He has an Aultman Taylor threshing machine and a Joliet corn sheller. I hope to see my letter in print as I want to surprise my sister.

Your niece,

ADELIN VIOLA WEIDEMAN.

Blanden, Iowa.

(Can't you send us pictures of the wee brothers for our department, Adeline?—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl twelve years old. I am in the eighth grade at school and expect to graduate this year so am very busy. I have two sisters but no brothers. My sisters' names are Marie and Evelyn. Marie is fourteen years old and Evelyn is seven. We all go to school. My teacher's name is Miss Schlotfeldt. I like her very much. Papa has a J. I. Case threshing outfit. Papa takes The American Thresherman and Farm Power and has taken it for the past ten years. We have a Ford Car and I like to ride in it. For pets we have a chicken and a kitty. I enjoy read-

ing the Children's Page very much. I hope to see my letter in print.

Your niece,

GENEVIEVE BOUSSELOT.

Calamus, Ia.

(I hope your graduation was a fine success, Genevieve.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am a girl eleven years old. I am in the fourth grade. My teacher's name is Madie Zimmerman. She is a good teacher. This is my first letter to The American Thresherman and Farm Power. For pets we have seven cats and a white rabbit. We have thirteen head of cattle and eight horses. I have two sisters named Mattie and Fannie and three brothers named Jerry, Nathaniel and Perry. I enjoy reading the Children's Page. Will write again when I see it in print.

Your niece,

KATIE T. YODER.

(Now you must write again, Katie.—AUNT JANE.)

DEAR AUNT JANE:

I am a boy twelve years old. I am in the sixth grade at school. My papa takes The American Thresherman and Farm Power and I enjoy reading the Children's Page. My sisters' names are Madeline and Agnes. My brothers' names are Howard and Alfred. My papa owns

a 10-20 I. H. C. engine and a new Racine separator. Papa threshes, plows and grinds feed. We have five horses, three cows and nineteen pigs and hogs. Mamma has about one hundred chickens. For pets we have two white opossums, two dogs and one cat. I will close. Hope to see my letter in print.

MARION JONES.

Linwood, Kansas.

(I hope mamma's chickens are doing finely, Marion.—AUNT JANE.)

DEAR AUNT JANE:

You have asked for the pictures of twins but I fail to have any brothers or sisters. I am writing this letter for you to put in The American Thresherman and Farm Power. I have not seen a letter from this part of the county, so I thought I would write one. My father owns a Case and a Russell compound engine. He owns a clover huller and a Russell separator. For pets I have a horse named Dolly, a dog named Frisco, a rabbit named Bunny and a pigeon named Bobby. My letter is getting rather long, so I will close.

Your little niece,

MADELYN ARCHER.

Clayton, Ind.

(Well, Madelyn, most of us have to get along without being "twins."—AUNT JANE.)

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FOR SALE—Welding plant, complete. H. A. Billingsley, Covington, Ohio.

FOR SALE—Hay baler, Robinson self feed. John A. Paul, Batavia, Ohio.

FOR SALE—Thoroughly rebuilt Fordson with plows. \$650 takes both. Arbuckle-Ryan Co., Toledo, Ohio.

FOR SALE—One 20-H. P. Advance engine, heavy gear. John Zehr, Mackinaw, Ill.

FOR SALE—Cheap if taken at once. 36x60 Avery separator, in running order. Ed Money, Richville, Minn.

FOR SALE—18-36 Avery, like new; Peerless huller. Wanted—25-50 Avery. North Fisher, Shelbyville, Ind.

FOR SALE—Eighteen-ounce canvas, 30x36 feet. Price \$35. O. S. Jones, Albany, Wis.

FOR SALE—Six-roll McCormick shredder, good shape. Urban Stroup, Sabina, Ohio.

FOR SALE—Ten-roll Plano corn shredder in good shape. Wm. H. Batterman, R. 4, Crown Point, Ind.

FOR SALE—18 Huber; ten-roll Plano shredder; size 15 Reeves sheller. All good. E. A. Henry, Camargo, Ill.

FOR SALE—One eight-roll Appleton shredder, run ninety days, \$475 cash. V. H. McFarland, Lodi, Wis.

FOR SALE—Case 15-27 tractor and plows, used only for demonstrating. bargain. Box 78, Knapp, Wis.

FOR SALE—Four Cushman engines at last year's prices. E. D. Richardson, Lawker City, Kans.

FOR SALE—Two-inch charcoal iron boiler tubes at one half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—Four-bottom Case plow, nearly new. Ten-foot Osborne tandem disc, rear disc. Jay C. Hartsook, Bonurant, Iowa.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—One Russell and one Case threshing outfit, complete, and clover huller. Henry Reesman, Burlington, Wis.

FOR SALE—One Big 16 Rosenthal ensilage cutter, nearly new. H. O. Downend, R. 1, Plymouth, Ohio.

FOR SALE—John Deere eight-bottom engine plow, good as new. Price \$300. J. H. Myers, Oakland, Ia.

FOR SALE—18-H. P. Huber engine, overhauled and painted, \$850. 15-30 Mogul tractor in good condition, \$300. Jules Gravelot, Chebanse, Ill.

FOR SALE—65-H. P. Case engine; 36x60 Rumely separator, run three seasons. Ralph McFarland, Dunreith, Ind.

FOR SALE—Eight complete threshing rigs. Ruth and Avery 36-inch feeders. Write for list. O. I. Evans, Sandwich, Ill.

FOR SALE—Case engine 36-H. P.; Buffalo Pitts bean thresher; Ann Arbor steel press, 17x22. Geo. Huebler, Ann Arbor, Mich.

FOR SALE—One eight-roll McCormick husker, No. 6 Birdsell huller, 32-inch Ruth feeder, new Heinke feeders. A. C. Staffin, Sidney, Ohio.

FOR SALE—Ten steam engines, five separators, Monitor well augur, sheller, carbide lighting plant, Heider. James Burrier, Cedar, Iowa.

FOR SALE—36x56 Nichols & Shepard separator, Garden City feeder, weigher and blower, good condition. \$200. Ben J. Schneider, Lowpoint, Ill.

FOR SALE—One sawmill; one 20x34-inch separator, complete; one Independent separator suitable for 10-20 tractor. F. E. Peterson, Kewanee, Ill.

FOR SALE—One Maytag shredder, \$250; one five fourteen-inch bottom Oliver plow, \$75; one 15-H. P. Case engine, \$300. E. C. Hazen, Calamus, Ia.

FOR SALE—One 8-16 Mogul tractor; one 12-25 Avery tractor; one four-bottom Grand Detour plow. C. A. Frank, Earlville, Ill.

FOR SALE—Rumely eight-bottom engine plow and five breaker bottoms, in good shape. \$500 cash takes it. Louis Block, Beardsley, Minn.

FOR SALE—25-H. P. Reeves Canadian Special engine with extension rims, first-class condition. Write Al Appert, St. Cloud, Minn.

FOR SALE—One nearly new No. 3 Aultman & Taylor clover huller, complete with feeder and wind stacker. Alvin H. Fasnacht, R. 4, Massillon, Ohio.

FOR SALE—Eight-roll Rosenthal shredder, used two seasons; excellent condition; \$400. H. V. Hess, Casey, Iowa.

FOR SALE—International 15-H. P. gasoline engine, nearly new, \$350. One French cornmeal burrs and cornmeal bolting outfit, \$75. Henry Beare, Ellis Grove, Ill.

FOR SALE—One Mogul 8-16 tractor; one four-bottom fourteen-inch Avery tractor plow. Ross O'Connor, Edgerton, Kans.

FOR SALE—8-16 Rumely four-cylinder tractor with two power-lift plows. Price \$400. James E. Mishler, R. 2, Shipshewana, Ind.

FOR SALE—Six P&O fourteen-inch breaker bottoms and eighteen extra shares. \$90 cash. J. E. Sykora, Windom, Minn.

BELTS COST MONEY—Have your canvas threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

FOR SALE—Five-plow Avery outfit, complete and in very good condition. Plow, \$300; tractor, \$1,000. E. R. Vehrs, Nekoosa, Wis.

FOR SALE—Large stock of rebuilt steam engines, separators, and tractors. We have what you want. J. O. Frish & Co., Fond du Lac, Wis.

FOR SALE—12-25 Avery as good as new, bought in 1919. Have sold farm, reason for selling. J. Marner, Hampton, Minn.

FOR SALE—Two Aultman & Taylor beaners with self feeders and carriers; practically new. P. J. Peters, 743 Bond Ave., Grand Rapids, Mich.

FOR SALE OR TRADE—Steam threshing and plowing outfit, in good shape. Will sell or trade for 20-40 Case tractor. Robt. Butler, Mandan, N. Dak.

FOR SALE—16-H. P. Advance Rumely steam engine, used one year; excellent condition. Have no use for it. A bargain. Archie Chamberlain, Burbank, S. D.

FOR SALE OR TRADE—Aultman & Taylor separator, 36x56; Huber separator, 32x54. Will take McCormick shredder in trade. J. W. Seeds, Blanchester, Ohio.

FOR SALE—One Oliver No. 79 four-bottom engine gang plow, excellent condition; has plowed less than one hundred acres. Huber Bros., R. 8, Watertown, Wis.

FOR SALE—My Avery 36x60 separator in A-1 running order. Will sell cheap if taken soon. Reason for selling, too large for this locality. Bernard Jaynes, R. 2, Preston, Iowa.

FOR SALE—Case outfit complete. 32x54-inch separator, good condition, self feeder and wind stacker, 50-horse engine, old, tank wagon, pumps, belts. Will sacrifice. Merchant & Jones, Boone, Iowa.

FOR SALE—One 20-H. P. Baker traction engine. One 36x56 Peerless separator, complete with attachments. Terms and prices right. J. A. Cooper, 234-236 W. Maryland St., Indianapolis, Ind.

FOR SALE—Six-roll Advance husker, used two seasons, in A-1 condition and well sheltered. Price \$400 f. o. b. Robinson, Kans. Jacob Binder, Robinson, Kans.

FOR SALE—Case 10-18; Titan 10-20; Deere plow; Fordson with plow, in excellent condition, nearly new. Will give field trial. Everett Morris, Pontiac, Ill.

FOR SALE—Aultman & Taylor separator, 36x56; 16-H. P. Advance engine; 16-H. P. Rumely; 18 Gaar-Scott; Baker separator; Reeves separator. Wm. Vandred, Mendota, Ill.

FOR SALE—New 1920 40-80 Avery No. 24706. Used very little; guaranteed same as new; in perfect condition. Going out of business. Price \$300. Ira Willeford, Logan, Ia.

FOR SALE—One 20-35 Flour City tractor, also one four-bottom P&O plow, 1919 outfit. Will sell separately. Address Ed Olson, Box 33, Brewster, Minn.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—20-H. P. Avery under-mounted, new flues, new gears; Avery 36x60 rebuilt, new belts, new weigher, new tank on wagon. Address C. H. Twiss, Tower Hill, Ill.

FOR SALE—12-25 Avery tractor, brand new, never was used and guaranteed to be O. K.; \$750. Twenty-one-inch Rosenthal silo filler, complete with pipes and distributor pipes, \$150. Carl Finkbeiner, R. 1, Saline, Mich.

FOR SALE—E-B thresher outfit. 40-H. P. double engine Z-3; A-1 separator, almost new. Threshed only 12000 bushels. A great rig. Bargain, \$3000. Write for description. T. C. Jones, Hopkinsville, Ky.

FOR SALE—16-H. P. Robinson steam tractor, good running order. One hundred foot, seven-inch drive belt. Six-roll corn shredder, complete, \$400. Orval Lykins, 2101 E. Willard, Muncie, Ind.

FOR SALE—15-30 International tractor with extension rims, used only twelve days; \$1400, will accept bonds. Looks and runs like new. Write W. O. Mecklenburg, 627 Washington Ave., S. Minneapolis, Minn.

FOR SALE—One only 200B Ohio ensilage cutter with forty-four feet of blow pipe and eight lengths of distributor joint, for \$200; used but one season; just as good as new. Write G. H. Mattes, Odebolt, Iowa.

FOR SALE—Aultman Star engine and American separator repairs from original patterns. Orders promptly filled. Send for new repair price list. Engine & Machinery Company, Marion Ave., and Navarre Rd., S. W. Canton, Ohio.

FOR SALE—Advance engine, 20-H. P., Baker valve, Nichols & Shepard 36x56 separator, feeder, wind stacker, drive belt, new tank. All in first-class condition. Must sell. C. J. O'Neill, Manteno, Ill.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—12-roll Advance husker, three years old; always sheltered; excellent condition. Price \$345 f. o. b. Oak Harbor, Ohio. Will guarantee or pay one-half your expenses to look at it. The Arbuckle-Ryan Co., Toledo, Ohio.

FOR SALE OR TRADE—One 32x56 Aultman & Taylor separator, \$450. Two six-gang P&O tractor disc plows, good as new, plowed three hundred acres; \$175 apiece. Or will trade all for new Ford. Derril Bull, Crawford, Okla.

FOR SALE—Four Frick steam traction engines, different sizes; several separators, various makes; bean thresher, ensilage cutter, practically new; Farquhar saw mill. Everything in working order and prices right. H. P. Kellogg, Nunda, N. Y.

FOR SALE—15-30 Rumely tractor, two sets four-bottom plows, guide, uses coal oil or gasoline. Has plowed less than four hundred acres, excellent condition. Cost new \$3600; will sell at a sacrifice \$2000 f. o. b. Address John W. Laubach, Carter, Mont.

FOR SALE—12-25 Model E Parrett tractor; 8-16 Mogul tractor with three-furrow Oliver plow; 20-H. P. Avery return flue steam engine; 36x60 Avery separator complete; 12-20 Heider, shows very little wear; 12-25 Huber tractors; Waterloo Boy tractor; 12-H. P. McVicker, portable New Waterloo Boy radiator. Indiana Parrett Tractor Co., Indianapolis, Ind.

FOR SALE—One 33x52 Gaar-Scott; one 32x56 Minneapolis separators, fully equipped. One 20-H. P. double cylinder Rumely, one 16-H. P. Gaar-Scott, one 16-H. P. Huber, engines. One eight-roll Advance, one eight-roll Appleton, two six-roll McCormick, huskers, one eight-roll Maytag Success husker in good condition. Rosenthal new huskers and silo fillers. Minneapolis engines, tractors and separators in stock. The Dafler-Moser Co., Richmond, Ind.

FOR SALE—One 16-21-H. P. Northwest Thresher steam tractor. Also one Avery 20-35-H. P. gasoline tractor. Bargains for a man having use for same. Machines can be seen at Rhinelander, Wis. Inquire of A. W. Brown, Rhinelander, Wis.

FOR SALE—Overstocked on brand new 1920 14-28 Avery tractors and several new three-bottom fourteen-inch self lift plows. A tractor and plow while they last for \$1500. A 12-25 Avery, was brand new September 15, 1919, used only one week, good as new, \$650. T. W. Maxwell, Shenandoah, Ia.

FOR SALE—One 30-60 rebuilt International Mogul kerosene tractor. Kept in good shape and in excellent working condition. Extension rims, six-bottom Oliver plows. Price \$1200. Also one 16-H. P. Stover portable gas engine, first-class shape. Price \$250. Arcady Farm, Lake Forest, Ill.

FOR SALE—Complete Minneapolis threshing outfit consisting of 18-H. P. double cylinder engine, 36x56 separator, 150-foot, four-ply, eight-inch Sawyer belt, which has been used only one season. Outfit is in good shape and ready to go to work. Has been run eight falls and always been shedded. Will sacrifice at \$1500. S. E. Zink, Green Mountain, Ia.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8,500, half cash, balance long time. Object for selling have larger tract which desire to improve. S. M. Hashbarger, care Clarke Publishing Company, Madison, Wis.

FOR SALE—One International ensilage cutter, Type E, up-to-date, four-blade steel wheel, also four extra blades; used only to cut twenty acres of fodder; in first-class shape. Also one 32x60 Avery separator, complete with blower feeder; in good shape, ready to go to work. One Avery truck with body, in good running order. One four-hole Keystone sheller and drag, in good running order. One six-hole Marseilles corn sheller and drags, new, in first-class shape; shelled only two cars of corn. Price complete works, \$1400 f. o. b. car. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5,000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5,000 or more cash, balance as long as desired, six per cent interest. The pasture alone with timber on the tract would pay for it, in a few years. B. B. Clarke, (Old Sile), Madison, Wis.

FOR SALE—One Avery 25-50 kerosene tractor, good as new; threshed about 25,000 bushels and plowed about 100 acres. Same equipped with self guide. Have new magneto and some other extra parts for same. Price \$1750. One Huber 32x54 thresher and drive belt; been run several seasons, is in good running shape and does fine work and will do satisfactory work for years. Price \$250. One fourteen-inch P&O four-bottom Independent beam Mogul automatic lift steel plow, with four subsoiler attachments and lot extra shares for same. Scotch Clipper bottoms. Price \$250. All this machinery has been carefully cared for and housed when not in use. Has been satisfactory but having no further need of it, it is for sale. W. Frank Jarrell, Chestertown, Maryland.

MISCELLANEOUS

TO SELL machinery or other property, write C. C. Shepard, Minneapolis.

WANTED—Kerosene tractor and separator. J. W. Dearlove, Glen View, Ill.

WANTED To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

WANTED—Secondhand separator, 22 or 24-inch cylinder. Give price. James Brunkan, Dyersville, Iowa.

BARGAIN—Complete threshing rig, just finished run, \$800. A. Jones, Stratford, Iowa.

FORGES AND DRILLS—Farm use sizes at bargain prices. Send for booklet. Harris Machinery Company, Minneapolis.

CORDWOOD SAWS—Cordwood saws—30-inch guaranteed saw only \$8.40; 26-inch, \$6.40; 28-inch, \$7.40. Other sizes. Harris Machinery Company, Minneapolis.

REBUILT SAWMILLS, cider presses, boilers and gas engines. Send for list. Roberts Machine Co., East Palestine, Ohio.

IT WILL BE material to the interests of threshers to get Howard prices for Shelby boiler tubes. Largest stock, lowest prices. M. E. Howard, Specialty Boiler Tubes, Indianapolis, Ind.

WE SPLICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebores cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

BOILER TUBES—**BOILER TUBES**—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

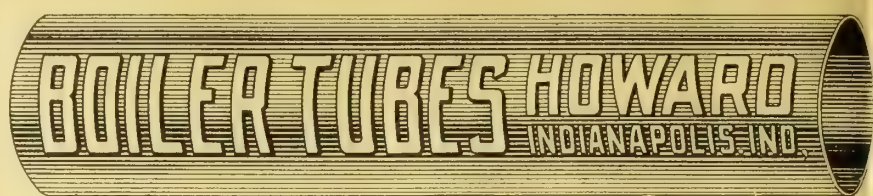
SILLO FILLERS AND SHREDDERS
FOR SALE—One Rosenthal Big 16 silo filler, used one season; one Appleton filler in splendid condition. Price \$200. One Ross cylinder cut equipped with thirty-foot pipe. Price \$150. One Rosenthal Big Eight shredder, used one season; one eight-roll McCormick shredder, in good running order. Price \$450. One factory rebuilt Big Four shredder, good as new. Write Henry A. Hellmich, Greensburg, Ind.

Thread in the Ignition System

In the ponderous motor trucks of today, with their sturdy metal and wood construction, it is difficult to conceive wherein thread could possible play an important part. Yet the light delicate thread of the household type is in reality indispensable—as indispensable as the engine itself.

Now the driver's seat cushion is no doubt sewn with thread and without the cushion truck drivers would be at a premium, yet were there to be a shortage in thread a substitute could easily be found. The fabric in pneumatic tires is essential, yet hard rubber tires can be and are used extensively.

But consider the heart of the truck—the motor. The fundamental principal of truck locomotion is the ignition of a small quantity of gasoline that is allowed to enter the valve, thus forcing the piston down the cylinder. This spark must be carried from the magneto to each of the spark plugs by means of conductive metal. Certainly no one would attempt to connect his spark plugs and magneto with bare copper wire. Insulation is absolutely necessary. Were it not for outside influences a thin covering would suffice, but heat, oil and gasoline are each



LOOK HERE, THRESHERS!

4010 two-inch Shelby Boiler Tubes cut to your length for about one-half price. A lot of two-inch Copper Ferrules, six cents each. Two-inch Boiler Flue Rollers, \$4.00 each. Boiler Tubes and Tools our specialty. Largest stock. Lowest prices. **M. E. HOWARD, BOILER TUBES and SUPPLIES, 374 S. Senate Ave., Indianapolis, Ind.**

Mention The American Thresherman and Farm Power

destructive to rubber and would allow the greater part of the current to be lost within a few days time. The application of a paraffine covering over the rubber would render the wire impervious to water, oil and gasoline but would melt in the presence of heat, while if varnish were used it would become stiff and crack, due to the same factor.

The only successful insulation is a tight woven thread covering over the rubber coating. One manufacturer of ignition cable makes insulation doubly sure by the application of a special enamel over the braiding. The braiding thus treated has been immersed in a solution of gasoline and oil for seventy-two hours without injury.

Vibration is also a factor to be considered. If the cable comes in contact with any part of the engine, chassis or body in such a way that engine vibration or other shaking causes friction, the insulation will eventually be worn off and the cable rendered practically useless. Two heavy braids covering the application of rubber withstand this vibration to a remarkable degree

Farmer Turns Manufacturer

Some manufacturers know very little about the hard labor that goes on about their product. The improvement that looks fine in a blueprint, lying on a flat, glass-topped desk, may not look half as good to the pitcher who has to work in the dirt of the machine.

One manufacturer who learned his improvements while walking the deck of his separator is E. P. Richardson of Cawker City, Kansas. For fourteen years he was a custom thresherman and during that time he and his men ate their full share of dust.

Richardson, during most of this time, used a twenty-foot feeder. Some of his friends used to joke him about the long trough. But he knew some good reasons for having it long. Instead of making it shorter, he made it longer. The longer the feeder, the less dirt from the machine. When a pitcher has to work close to the machine, all day long, he can appreciate how this lessens the discomforts of stack threshing.

His idea seemed so good that he decided to make a few for his neighbors. To do this, he started a small

shop of his own. Today it has grown to such a size that he threatens to break into the capitalist group.

If you're wondering about your stack threshing this fall, send a line to Richardson.

Shop Practice for Farmers

A thoroughly practical and helpful book prepared especially for those who have had little or no experience in shop work is "Shop Practice for Home Mechanics," by Raymond Francis Yates. The introduction is given over to an elementary explanation of the fundamentals of mechanical science. This is followed by several chapters on the use of small tools and mechanical measuring instruments. Elementary and more advanced lathe work is treated in detail and directions given for the construction of a number of useful shop appliances. Drilling and reaming, heat treatment of tool steel, special lathe operations, pattern making, grinding operations and home foundry work make up the rest of the volume. The great number of clear engravings add much to the text matter and to the value of the volume as a visual instructor. This book sells for three dollars, and is published by the Norman W. Henley Publishing Company of New York.

A lot of foolish, gilded boys blow in their ample wage for all the cheap and gilded joys of this besotted age. The wise man's rede, the poet's rune, are handed them in vain; they never save a picayune against the day of rain. The truer joys of life they miss, for gilded bricks that shine; they never know the wholesome bliss of having seeds in brine.

The wise youth shuns the Great White Way, and pickles every yen; he does without things every day to save the iron men. He wears his clothes until threadbare, and hates that should be canned, and walks nine miles to save the fare a street car would demand. He eats an onion or a leek and thinks such luncheon fine; he earns twelve shining bucks a week, and of the twelve saves nine. He misses all life's joy and light, its flavor and its fizz; but when he counts his dime by night, true happiness is his.—*Walt Mason—Judge.*

He Hunts Lions for a Living

By ROBERT H. MOULTON

THERE are men who would rather hunt wild game than eat. Once a year, perhaps, they get a chance to go up into the north woods for a few weeks and, at an expense of several hundred dollars, take a shot or two at a moose, a deer, or maybe only a wild cat. On the other hand, there are some three hundred men in this country who do nothing else, year in and year out, but hunt mountain lions, bears, wolves, coyotes, bobcats, and some smaller fry in the shape of range varmints, and receive real money for it. But then, you see, they save the ranchers of the West millions of dollars worth of livestock each year by putting the natural enemies of this stock out of business, so it is a pretty good investment any way you look at it.

The majority of the three hundred men employed by the United States Biological Survey are in the capacity of hunters are young, vigorous, excellent shots, and wise to the ways of wild animals. But the spriest, wisest, and deadliest shot of the whole bunch is a young fellow of sixty-five years, Ben Lilly by name. If you doubt it, just take a look at his record since 1912. This record shows that during the last seven years he has killed, single handed, twenty-six bears, some of which were grizzlies; two hundred and fifteen mountain lions; over three hundred wolves and coyotes, and so many bobcats that he got tired of counting them. On the basis that the wolf kills a thousand dollars' worth of livestock a year, the bear and mountain lion five hundred dollars each of livestock, and the coyote and bobcat each do fifty dollars worth of damage. Ben has saved the western stockmen enormous sums.

Ben first heard the call of the wild while still in his 'teens, down in Louisiana where he was born. Loaded with a sixty-pound pack, he broke his way through the Louisiana canebrakes in search of game—no varieties or species barred, from bears to wildcats. Adeptness with firearms and courage were his resources. As a rule, every time his rifle cracked some animal dropped in its tracks or popped its way into the underbrush badly wounded, and for the last half century Ben's rusty old rifle has been spitting fire, while his name as a "sure shot" has spread all over the West.

It was the fame of Ben's exploits that led Col. Roosevelt to secure him as a guide in his hunt through the Louisiana canebrakes at the time when "Teddy Bear" attained popularity. And it was this famous chase that led to his becoming a collector of specimens of wild animals for the Biological Survey. For the last seven years he has been in the continuous service of this bureau as a professional hunter, and it seems probable that he will hold the job for a long time to come.

Years spent out in the open, a world of mountain climbing, regular and temperate habits—Ben neither smokes, chews nor drinks—has made him as hard as nails and as wiry as a young mustang. It is no job at all for him to tire out two or three

hunt, and on Sundays; it is a strict rule of his to observe the Sabbath religiously, and the result is that many wild animals, on whose trail Ben was pressing hotly, took advantage of his fixed habit to make their getaway on Sunday. But even at that he usually gets what he sets out after. For example, one old offender in the shape of a grizzly bear which had been robbing ranches for years without being apprehended, led Ben a merry chase through three states before the old hunter finally caught up with him and presented his card in the form of a soft-nosed bullet right between the bear's eyes.

Ben just dotes on bears and mountain lions, perhaps because they are the most savage of the predatory animals he hunts; the lesser fry he regards as a sort of side dish to top off the main feast. Of course, he frequently takes terrible risks, and

he has had many narrow escapes from wounded bears and lions, but his knowledge of the country over which he travels, almost inaccessible mountain heights and deepshadowed canyons, and the habits of the creatures he chases, reduces the dangers that belong to his calling.



Ben Lilly and Some of His Dogs.

sets of dogs in rounding up some range varmint.

These dogs of Ben's, by the way, are almost as remarkable as their master. There are about twenty of them and they are trained to the strictest obedience and the craftiest service. One of these dogs has over two hundred mountain lions to his credit, and some of the others are pressing him closely. A word, even a look, from Ben is enough to curb any undue impetuosity on the part of the dogs; they are naturally keen to rush ahead and finish up the job as soon as they hit the trail, but that isn't always best for their health, so Ben has to exercise a restraining hand. Usually half of the dogs are taken along on a hunt while the others are resting at some ranch. After a week or two in the mountains, Ben goes back after the second set of dogs and leaves the first set to recuperate from their strenuous labors. The dogs don't just see it that way, and it is said that they raise an awful rumpus when they see old Ben and their lucky fellows starting off on another chase.

Ben himself hardly ever rests except, of course, at night, when he can not

Weighing Crops in the Field

By ROBERT H. MOULTON

IT sometimes happens that a farmer desires to weigh small quantities of hay or other crops but finds the load too heavy and cumbersome to be lifted from the ground by hand. This difficulty has been overcome by County Agent E. H. Thomas, Klamath County, Oregon, in a very simple way. He takes two stout poles, about eight feet

long, and crosses them securely near the top. Through the notch thus formed he passes a third pole, at one end of which a small scale is fastened. The scale in turn is hooked into a rope passing around a bundle of alfalfa, for instance, and then by working the pole as a lever the load is easily lifted from the ground.



Device for Weighing Small Quantities of Hay or Other Crops in the Field.



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"The use of a truck on Goodyear Cord Tires has increased my land value by bringing my farm closer to town. Power machines, assisted by this pneumatic-tired truck, offset my labor shortage. The Goodyear Cords on my truck have traveled about 10,000 miles to date. Solids can't go into the soft fields; pneumatics go through easily—haul 450 crates to 40 by team. Hard to sell a second-hand truck on solids here."—Glenmore Green, Farmer, Fort Valley, Georgia

EXTENSIVE rural experience, like that related above, has confirmed the tendency of farm land prices to increase when Goodyear Cord Tires are used to cover long or difficult hauling routes.

Fertile acreages, ten to twenty-five miles from the nearest town, have become more profitable and hence more saleable due to improved transportation on these able and rugged pneumatics.

What formerly was a tedious and jarring haul by either team or motor truck, has become a brisk, smooth trip due to the grip, cushioning and spryness of the big Goodyear Cord Tires.

These virtues frequently enable short cuts to market, bring more markets within easy-hauling range and pave the way for the safe, punctual transit of perishables and shrinkables.

The huge strength of Goodyear Cord construction, developed with the manufacturing care that protects our good name, makes possible the utmost utility and economy of this type of pneumatic tire.

Detailed information, concerning the manifold advantages of pneumatic-tired trucks and general farm motorization, will be sent on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR
CORD TIRES

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HMT

Farm Mech

The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON, WIS.

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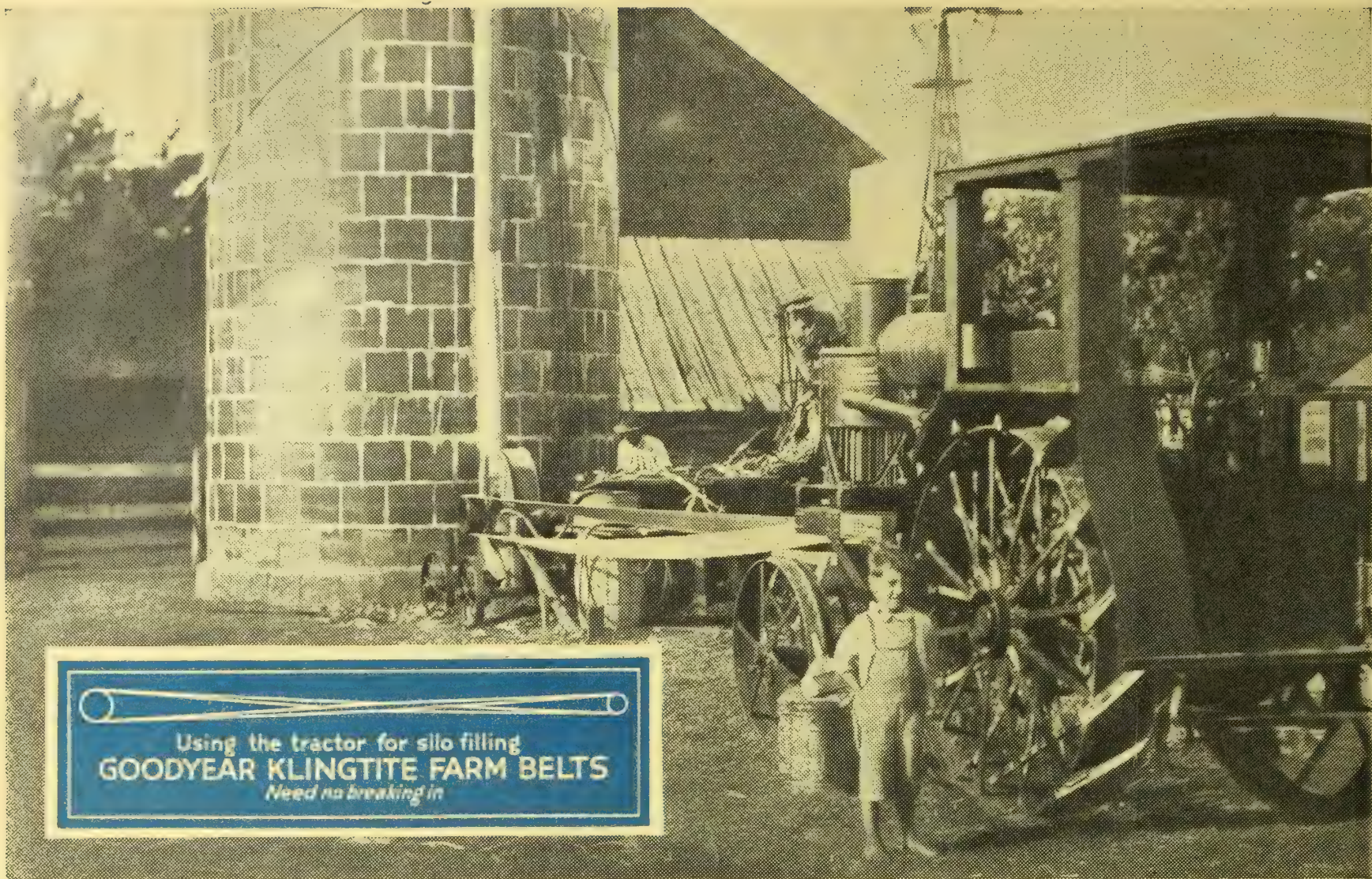


October-1920

Volume 23 No.6

S-P M.L.

Yearly Subscription Price One Dollar



Copyright 1920, by The Goodyear Tire & Rubber Co.

Profitable Silo-Filling and Goodyear Belts

It paid for itself in four months of silo-filling, feed-grinding and wood-sawing. That is the direct estimate of its value which Herbert Goembel, of Prophetstown, Illinois, places on his Goodyear Klingtite Belt.

His own figures show that this powerful, economical and trouble-free belt increased his operating profits by 30%, reduced his fuel bill 40%, and put him nearly a month ahead in his work.

Its first job was the severe duty of silo-filling, testing the ability of a belt to carry power evenly and at full head, so that there will be no clogging in the steady forcing of the ensilage up the stack pipe.

Then it was transferred to the feed grinder, one of the hardest drives on the farm; then to the wood-sawing rig; and now it is in use in threshing. It has met every drive condition with unfailing strength, and worked with the same unconcern amid summer's heat, winter's cold, and a two-day sleet storm in March.

It needed no breaking in. It required no belt dressing. It compelled no engine resetting, because it did not stretch

or shrink. It operated perfectly from the outset, Mr. Goembel declares. Its friction-surface grip on the pulleys delivered full power without a trace of slippage, and its clinging, free-swinging action permitted its being run loosely, with consequent benefit to the engine bearings.

No other belt in Mr. Goembel's lifelong experience as a farmer has approached this 75-foot, 6-inch, 4-ply Goodyear Klingtite Belt for working economy, power, and freedom from trouble. After a year of hard service, its present-day condition is its best pledge of long life. Its owner thinks it is the best help on the farm.

Goodyear Klingtite Belts are specified to farm power work. They come in endless types for threshing and in suitable lengths for all other purposes.

They are made of the highest grade materials, are of unstitched and bonded-ply construction, and, like Goodyear Cord Tires for Motor Trucks, are carefully built to protect our good name. Write to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California, for a copy of the Goodyear Farm Encyclopedia.

GOODYEAR
KLINGTITE BELTS



The First Step To An Even Stand

Soil, with a proper proportion of plant food, is the foundation for an even stand. Such a soil can be built up by careful handling, whatever its condition to start with.

The best soil builder is manure. With the E-B Spreader, it is a simple matter to fertilize heavily the spots where the ground is poor, and then shift back to a finer spread where the soil is rich.

E-B Spreaders cover the ground uniformly, with thoroughly pulverized manure. They spread wider than the wheels, so that the wheels are always on dry ground. The width is only six feet, so that it can be driven through the ordinary barn door and loaded from the stable.

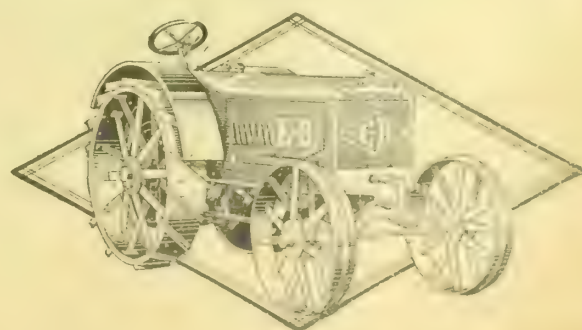
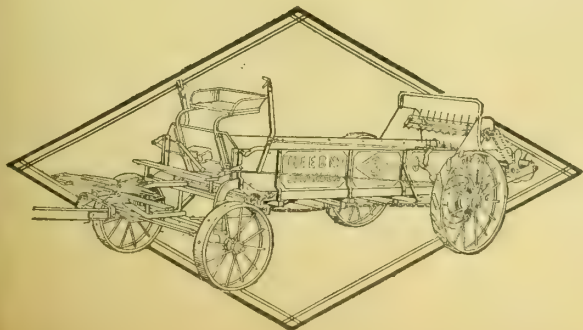
Other features are: water-tight bottom; auto-type pivoted wheels; all-steel construction except box, seat and pole; beater mechanism that lightens draft, pulverizes perfectly, and never clogs.

The spreader can be equipped with a straw-spreading attachment that does as good a job as the spreader.

Ask any E-B dealer to explain the E-B Spreader to you in detail.

Emerson-Brantingham Implement Company, Inc.
Established 1852 Rockford, Illinois

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company



HYATT

ROLLER BEARINGS For Ensilage Cutters

THE farmer must handle his silage at the right season and have a dependable machine that will get the job done in time.

Hyatt Bearings in ensilage cutters make for more dependable operation. They require far less time for oiling, provide more economical operation, decrease the need for repairs and add greatly to the life of the machine. They never need to be adjusted.

And this is the kind of service that Hyatt Bearings also give in tractors, trucks, plows, threshing machines, grain binders, wind mills and other farm machinery.

Send for the Ensilage Cutter Booklet

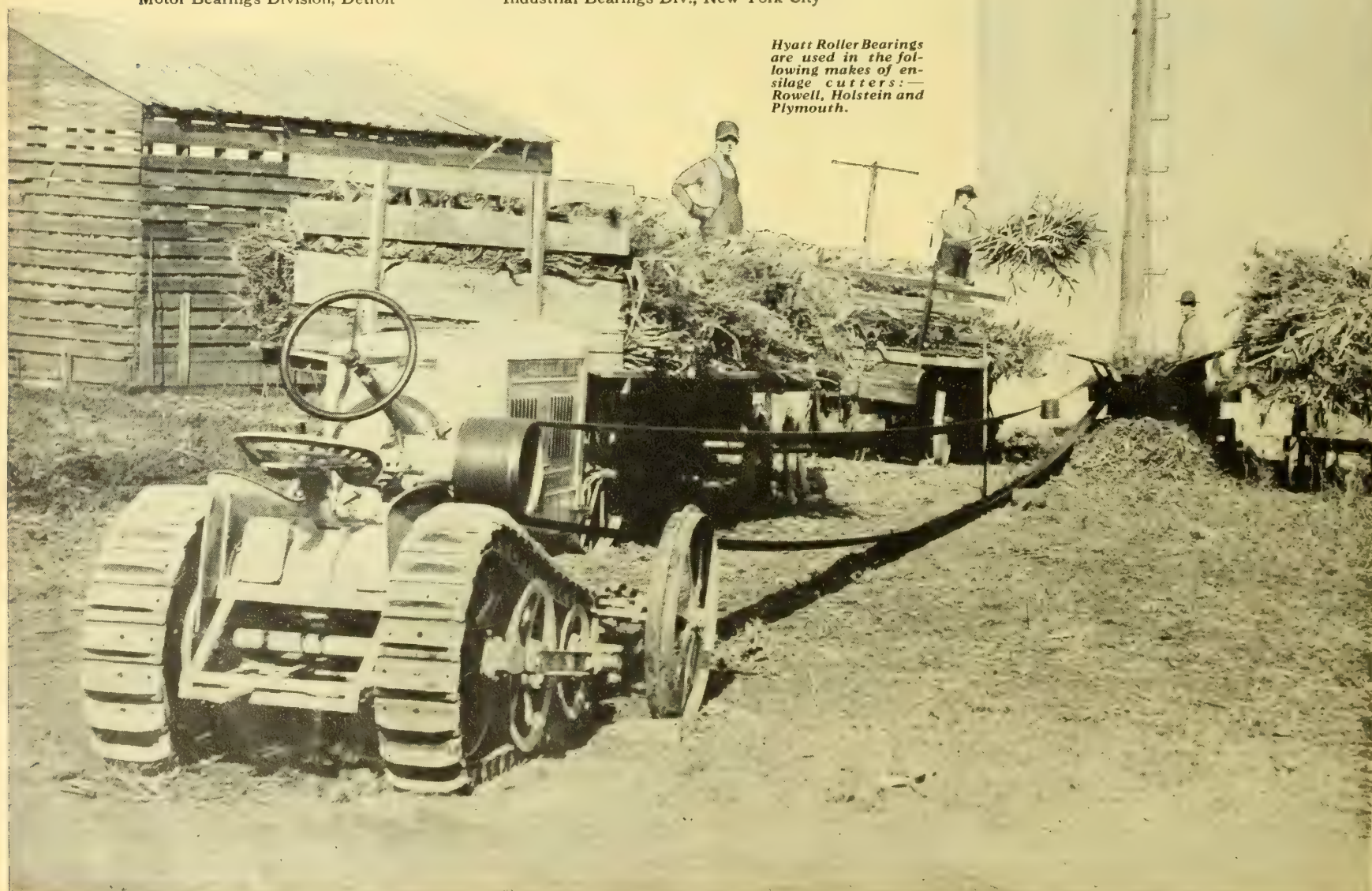
HYATT ROLLER BEARING COMPANY

Tractor Bearings Division
Chicago

Motor Bearings Division, Detroit

Industrial Bearings Div., New York City

*Hyatt Roller Bearings
are used in the fol-
lowing makes of en-
silage cutters:—
Rowell, Holstein and
Plymouth.*



The AMERICAN THRESHERMAN AND FARM POWER

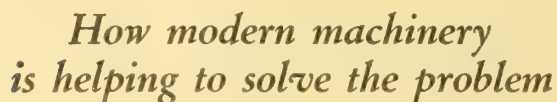


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DOMESTIC	New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
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The AMERICAN THRESHERMAN and FARM POWER

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MADISON, WISCONSIN, OCTOBER, 1920.

No. 6.

Whose Truck Will the Farmer Buy?

TRUCK companies that have been casting speculative eyes toward the farm field should wake up and get acquainted with the farmer now. With the assurance that the farmers want trucks, and want them more abundantly, the farm power companies are "throwing their hats in the ring."

A short time ago this office received pictures from two big machinery companies. These pictures arrived on the same day, accompanied by similar announcements. Both the Avery Company, Peoria, Illinois, and the Advance Rumely Company, La Porte, Indiana, announced that production of farm motor trucks was in full blast.

If truck companies continue to trifle with the farm field until their chance of breaking in and getting established is gone, they will deserve the hard luck that most certainly will be their portion. After the machinery companies, with which the farm trade has had long years of pleasant associations, get to going strong on this farm truck business, the present truck companies will be working under a big handicap if they, as strangers, try to get the farmer's ear.

The farmer is one man who sticks by his friends. Men who do business with him bank on this fact and it explains why the manufacturers who have been selling their articles to him are so eager to learn what he wants.

The men who have been making farm machines for the last few years are well known to the farm-



The Avery Truck Is New But the Name Is Well Known.

ers. The trade-names are established. If a salesman calls off a list of the ten leading manufacturers of grain separators, for example, any farmer knows considerable about every name.

This is as it should be. The men who, from the old horse-drawn implement trade, have built a motorized farm power business, have some claim to the regard of the farmers. The good seller, as well as the good purchaser, deserves consideration.

There was a time in 1912 when the writer worked in the delivery business in New York City. At that time, all the express companies (there were four in New York then: Adams, American, United States and Wells Fargo) were delivering express by horse-vans.

I thought I saw a chance to get into some express company, work up with the "wagon men," and be in a position to handle truck distribution of parcels, maybe get a supervisor's job, through knowing about motor truck deliveries and routings. I got a job with Wells Fargo. Many a night, as we sandwiched our horses into the Jersey City ferry-boats, I figured how the time was coming when the speed and economy of motor trucks would inevitably cause the horses to be replaced by trucks.

After working three months in this fashion, being promoted to my own wagon with helper, I saw the Big Boss in his New York office. I argued for motor trucks, to get a chance to prove that their increased speed and carrying

capacity would make them the most economical system for handling New York City deliveries. The Big Boss couldn't see my arguments.

This personal history may be beside the point. It is my strongest recollection of the apathy displayed by many men—big men—in 1912, toward the use of motor trucks for big delivery problems. Less than eight short years have passed. During that time, the motor truck has won the attention and respect of practically every man in this country who struggles with transportation problems, the farmer included.

This means a great field is open. Now the question is, who have entered and controlled the

(Continued on page 42.)



The Rumely Trucks Begin Their Advance Toward the Farm Field.

Rice Growing

By ERNEST A. PHILLIPS

It was way back in 1694 that the first attempts to grow rice in America were undertaken.

And although the general belief is to the effect that rice was introduced to America as a result of scientific study, such is very far indeed from being correct; as, in the year mentioned, a rice laden vessel, plying from Madagascar to Liverpool, put into Charleston, Carolina, during a storm, and the captain of the ship, noticing that the soil surrounding Charleston greatly resembled that in which his cargo was grown, gave the governor of the little colony a handful of rice, suggesting that it might grow if planted. The handful of rice was planted. It grew. And today rice growing is without doubt the heaven for farmers desiring to engage in a branch of husbandry which requires the use of the most powerful and modern and up-to-date machinery and farm implements known to the human race.

In the beginning, rice is the native of distant India; for years it has been grown to success in both China and Japan, and now it is one of the foremost crops raised in America.



A Steam Threshing Rig in Action in the Rice Fields.

It wasn't till 1750 that the rice industry commenced to blossom out, as at that period it was expanded into the states of North Carolina and Georgia; and at the beginning of the Civil War it entered Louisiana, which state is now the leading rice producing state in the Union. In 1903 it spread out till the state of Arkansas saw possibilities of growing rice to profitable extent, and then followed California with her first attempt to grow rice. So it is to be clearly seen just how advanced the rice industry is today—due, mostly, to the gradual advancement in the evolution of farm machinery and implements.

Are right here let it be stated that one craving to farm with big machinery certainly will have those wants fulfilled in every respect if rice growing is undertaken—as nothing but the very strongest survives in this great branch of husbandry.

Rice may be grown on many different soils, where the weather is damp and moist and where there is sufficient water for irrigation; as, in addition to the yearly rainfall of a few inches, rice fields must be swamped time and again. And to properly secure this vast volume of water, it is necessary that the large, electric centrifugal pumps be installed, pumps with a power of throwing from between twenty to forty thousand gallons of water per minute. One of the accompanying illustrations will adequately show one of these

large pumps in action. The soil should contain enough humus to stimulate the best growth and at the same time be fine and compact enough to retain irrigation water, which is very essential in rice growing, and the soil underlaid by a tenacious clay, such as is found in Louisiana, the Carolinas, Texas and Arkansas.

And it is right here that rice growing offers its drawbacks, from the farmer's viewpoint. With from seventy to one hundred days of steady irrigation, it will be seen that this soil is standing under water for a long period, consequently when harvest season arrives, the farmer encounters considerable difficulty in cutting and binding. In certain parts of the states growing rice it is permissible to use large tractors, in others nothing but six and eight-mule teams can be used. Owing to the fact that innumerable boggy spots are to be found in the rice fields after this extensive irrigation season, the farmer can use tractors to the best of advantages on certain patches of his land, and in others he must remove the tractors and bring back into use the old lop-eared mule.

This, however, does not apply to all rice farms, as there are many where tractors alone are used, others where both tractors and mules are used, and still others which can use naught but mules.

In plowing this also holds good; and it is not an uncommon sight to see the biggest tractors slowly winding their way down the fields, sunk from six and eight inches to ten and twelve in the muddy, sloppy, gumbo.

And as the plowing is done on stretches averaging from one mile up to three and four and even ten miles in some instances, it is seen what an advantage the farmer having soil upon which he can operate tractors has over his unfortunate brother who finds it necessary to rely upon the mules and horses.

As the irrigation system also requires that many



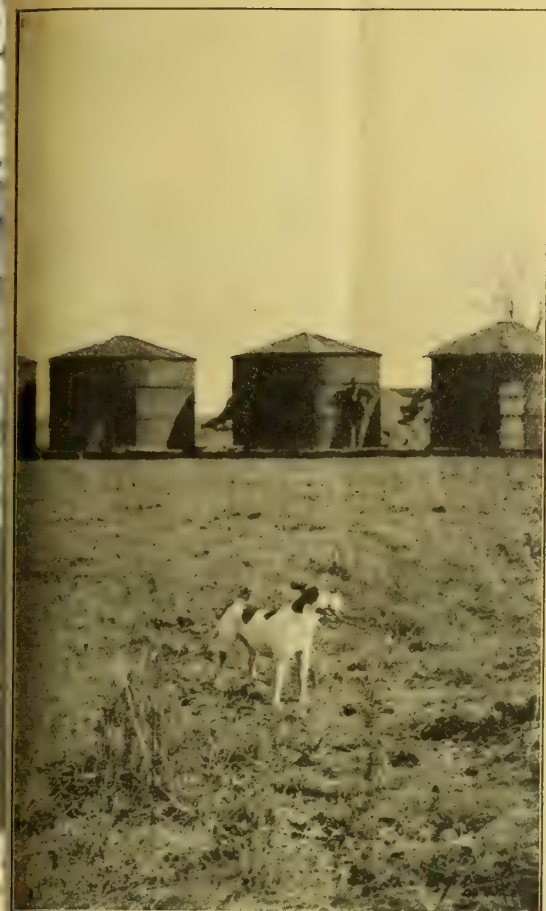
A Pump Throwing Fifty Thousand Gallons of Water Minute for Irrigation.

levees be plowed up here and there throughout the fields, the tractor here comes in for a difficult piece of work; but farmers who are able to use tractors for this particular piece of work all unite in proclaiming that the tractor has it over the ancient primitive methods a thousand ways; and as they are much cheaper to operate than fifteen or twenty head of mules or horses it is again seen how the tractorized rice fields surpass those which are still compelled to use horses and mules in this heavy work.

Following the irrigation, the massive fields are then drained that they may dry out a little before cutting and binding is started; and following this the threshing rigs commence to hum and bark. And as each farmer owns his own outfit complete it will here be seen that rice growing, even to start in on, requires at least ten or fifteen thousand dollars in addition to the investment in land and farm buildings. Plainly, rice growing is for the man who loves to farm on a large scale, so to



Cutting and Binding Rice with Tractor Power.



One Thousand Bushel Capacity Grain Tanks in the Field.

speak, and who loves to reap large profits at the end of the year.

By degrees the gas tractors are coming into use, and there are thousands of them in the Southern rice fields today; yet many farmers still cling to the old wood and straw and coal burning steam tractors, such as the one in one of the accompanying illustrations. Many types and sizes of tractors are to be found on the rice farms, ranging down from the massive 100-horse power steam outfit to the small sizes of gas tractors.

Formerly it was the custom to thresh into large sacks placed under the separator spouts, but recently a new field grain tank has been introduced which is vermin and mice proof, and which at the same time protects the farmer against possible loss due to rain. These large galvanized iron tanks, with a capacity of one thousand bushels, are mounted and constructed upon double end sleigh runners,

and they may be moved to any part of the field by either horses or tractors and accordingly set beside the threshing rigs. On top of these tanks are two large port holes, into which the spout is dropped and into which the threshed rice falls.

Another beauty about these field grain tanks is that the farmer may keep his rice till the market raises to the price he wants without suffering from storage expenses if he held up his crops in the town mills.

The farmer so desiring may set his rig any place in the field and move in his field tanks accordingly so that not a single move is made during the entire threshing season, and this, as will be plainly understood, goes to great extent toward lowering threshing expenses and saving time. One of the illustrations will show how the tanks were set for the rig, and the straw stack back of them indicates that the whole threshing was done on one single spot—and by threshing directly into the tanks the cost for sacks, a sack sewer and a sack remover is entirely done away with.

Should the rice accidentally become damp as a result of continual rain or sweating of the galvanized iron, it can be dried by a practical process which is in use in many parts of the rice growing country. A hole leads back into the tank, and on the floor of the tank before rice is started into it there are five three-sided troughs, so arranged that they are connected with the opening and at the same time reach all the interior of the tank. A

fan tube, placed in this hole, with the fan running, throws a stiff breeze into the tank, which in turn comes up through the rice from the bottom, thereby drying same; but it is seldom that such requirements are found necessary as the tanks have proved to do away with the dampness.

The rice as it comes forth from the threshing rigs is known as "paddy" and the grains are en-

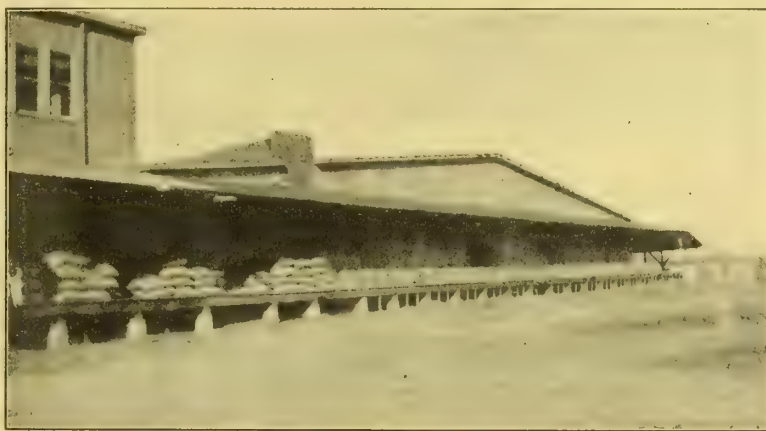


Rice Mill at Lonoke, Arkansas.

closed in hard, thick husks, which makes the object of milling a process to remove this husk with as little loss as possible in milling in broken grains, as the American housewife purchases but little save that rice showing the largest and most polished grain. The polishing process also results from milling.

The ancient methods of milling rice have been surpassed by the large, gigantic mills, which polish and mill out hundreds of barrels of rice per day. As soon as the threshing season starts and the "paddy" commences to come into the mills, they soon become packed and jammed, and as a result must stack the un-milled grain outside on the long platforms, as is shown in one of the pictures. Another illustration will show a number of wagons waiting to reach the mill with their "paddy."

Owing to the bad country roads, which have yet to be placed on a civilized basis, it is hardly possible to use tractors for hauling to the mills; but in some localities, where the roads are properly paved and constructed, it is not uncommon to see one of the small types drawing three and four trailers with the sacked "paddy" stacked up high on all of them.



A Mill Full to Overflowing with "Paddy."

Benefits from Farm Power

By ARTHUR L. DAHL

THE advent of the tractor on the farm has done more for many farmers than the tangible results that might be expected from its use. The power machines have turned many discouraged owners into optimists, because they were able to perform work at the right time and under adverse conditions, and produced crops that brought prosperity to the owners. The superiority of tractors over horses in supplying the power for farm work has been told so often that it is now an old story. The indirect benefits derived from power farming, however, are so varied and so novel, that we are interested in a mere

recital of the experiences of many owners.

One of the old-time farmers of De Kalb County, Illinois, was very much worried over the attitude his son had toward farming. This farmer has descended from a long line of country-dwellers; he loved rural life and could not understand how anyone could choose any other vocation. He had settled on his present place with his father, and much of his early life had been of the pioneer type, with the hardships of pioneering. He had worked long hours in the fields with his horses, and grown to accept conditions as he knew them. He had prospered and

his farm was one of the best in the neighborhood, but it was laid out along old-fashioned lines. He thought that what had stood him in good stead in his early life should be retained and adopted by his son for the future. In this he made the mistake of wanting his son to see things out of the same eyes that he did, whereas his son had the vision of youth and in the short time he had gone to the agricultural college of the State University he had seen and appreciated the rapid strides the up-to-date farmers were making. He didn't want to go back to the farm and plow with a team of horses, no matter how good they were, if that

team compelled him to trudge all day across a piece of land that could be plowed in an hour or two with tractor power. Accordingly, when all suggestions for the introduction of motive power on the farm were met by the statement from Dad that horses had helped him build up the place, and horses were good enough to carry on the work, the son decided on a radical step. He liked machinery and if his father would not let him work with the kind of tools he loved, he would go where he could find them. The boy's decision came as a blow to the old man, but it woke him up to a realization that

(Continued on page 44.)

The Old Thresherman Talks of Quitting

By W. C. SMITH

"WELL, sir," said the Old Thresherman, squinting his eye along the edge of the flywheel to make sure that young Evarts who was handling the engine had got square in line with the separator, "well, sir, I reckon I have swore off this durn threshing business a hundred times. Every year I say, well, this is my last, but it ain't. Hook her up a notch, sonny—always take all the advantage you can and save coal and water. Took me a long time to reconcile myself to hooking an engine up. You see I had the idee that shortening the stroke was liable to wear the face of the valve or the slide and I was afraid to try it. But, shucks, the way they make engines nowadays and the sure shot oil pumps they put on them does away with most of that danger.

"It was different with the old taller cups we used to use. Lordy, I've run many a day on suet—just stuff raw suet into the old taller cup and let it render itself. Taller was mighty good but them old cups always fed by jumps and jerks. You was either getting too much or not enough—generally not enough."

"This your first job?" I asked.

"Just started," replied the Old Thresherman. "Now look at that durn boy throwing bundles in butts first. Reckon he don't know which end of a bundle has the wheat in it?"

The Old Thresherman spoke to his separator man and presently the boy on the wagon was regularly and steadily pitching bundles head first into the maw of the feeder. The Old Thresherman came back to where I was standing with a grin on his face.

"Just as well start out right, I reckon," he told me. "If a fellow gets started to pitching off one way or if you let him have his way at first he is pretty hard to change. You see a feeder is made so it will check the bundles for a weeny tee bit as they strike the cylinder—at least they are supposed to be made that way. That lets the cylinder teeth strip the heads and knock a lot of the grain out. If the butts go in first, the bundle is jerked in so fast when the heads get to the cylinder that it is harder to get all the grain out. A fellow has to look out for a lot of little things like that. Yes, sir. I reckon I have quit threshing as many times as any man and here I am still at it and can't quit."

"Why?" I asked. "You could get along very comfortable without doing this kind of work."

"It ain't the money," said the Old Thresherman. "Lordy knows you don't get rich running a threshing outfit. Hustles me to break even lots of times. I reckon I just naturally have a hankering to be oily and greasy and covered with dust and to be jawed at and work all day and half the night. That must be it. I swear off and durn if I ain't as crazy as a kid just as soon as the threshing season starts. I'm like Joe Bennet. J'ever know Joe? Joe was a kind of a no-good. Pretty decent fellow when he was sober but he wasn't

ever sober to speak of. Said he just couldn't quit drinking. Someone told him to taper off and kinda quit easy. 'When you get all the whiskey you want, Joe, just say sarsaparilla. Taper off on that.'

"'Lordy,' says Joe, 'that's a good plan all right but when I get all the whiskey I want I couldn't say sarsaparilla to save my soul.'"

"Joe is doing pretty well now since things have gone dry and he had to quit and I reckon if they ever pass a law making it a crime to go traipsing around the country with a threshing outfit I'll quit about like Joe did—because he had to.

"Well, that is the last of this job—that little jag just driving up. You see I just took this job to kinda start on. Ben ain't in no ring and only had about six acres of wheat. I told him I'd

cause your weights won't hold out. That used to worry me considerably but it don't any more. I like to have a fellow test out my weights, but durn if I aim to have him haul the grain loose in a wagon box for five or ten miles to do it."

The last bundle was through and the grain underneath the feeder had been carefully cleaned up. Young Evarts shut off his power and before the motion of the separator had died was reeling up the drive belt. The blower was swung around and the separator man had folded the feeder.

"Pretty daggoned smooth working bunch," smiled the Old Thresherman with pride. "They know what to do and do it. Well, how do you think she is going to perform, Dave?" This to his separator man. "Fine as silk," said Dave. "She

sure hums nice. Ain't bearing warm or a bolt loose that I can find. Some of the belts are stretchin' out a leetle. Have to cut some of them, I expect. That's natural, though. The old girl acts like a new one every time we take her out. Guess she is good for a dozen seasons yet."

"Sure," answered the Old Thresherman. "That's what comes of keeping them up. Well, let's be moseying along. Want to get started in our ring in the morning. Told Reynolds we would pull over this evening and be ready."

He climbed down on the edge of the feeder as young Evarts coupled on with his engine, and as they pulled out on the road I saw the Old

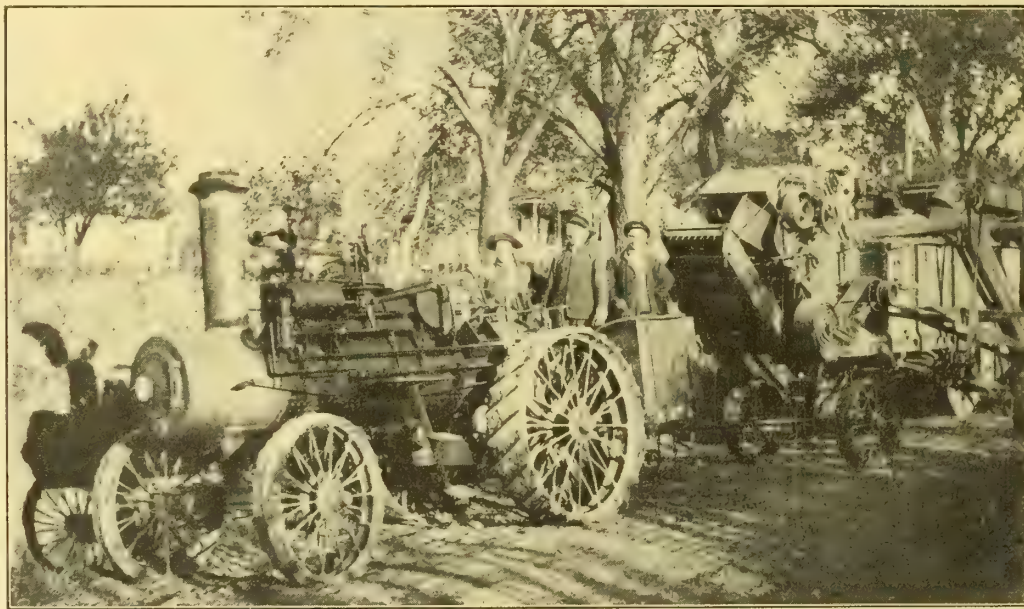
Thresherman's feet swinging happily over the edge of the engine bunkers and the wordless tune of his "Tum te dum tee diddle te dum" song showed that he was perfectly satisfied.

The season had started.

An Efficient Post Puller

IF before you sell an old mowing machine you will remove the curved draw-bar found underneath the machine together with the inner cutter bar shoe to which it is attached you will have a most convenient tool for pulling fence posts.

The longer or rear arm of the draw-bar will serve as a handle, the shoe as a base or fulcrum, and the front arm of the bar may be fastened to the post with a piece of chain. Raising the rear end of the bar will now exert an upward pull on the post. The bar may be reversed; it makes but little difference which arm of the bar is used or top. The bars from machines in which they are attached in front of the shield to the crank wheel as in the Deering, Johnston, etc., are better adapted for this purpose than those from the McCormick or other machines in which the front end of the bar is attached back of the crank wheel. Those from an old Deering are the most convenient, as the casting at the front end of the bar has a large ring-like hole through which a chain may be passed. You will soon see how it works. This tool may be used by hand for light work or the shoe may be bolted to the edge of a stoneboat and be used with a longer chain and a team.



This Picture Sent to Us by George Clausen of Council Bluffs, Iowa, Shows His 12-Horse Power Engine and 28x50 Separator on the Move to a New Job.

thresh it before I started on my regular ring so as to get things lined up. I like to do that. No matter how much repair work you have done or how careful you are there is apt to be some things that you have overlooked and a little run like this shows them up. You see we will get done early here and that will give us time to go over her before we start in the morning. There is always something to do when you start out."

The Old Thresherman went to his separator box and came back carrying a pair of steelyards.

"Come and help me weigh up some of these sacks," he said. "I aim to be sure and get a bushel in each one and after we weigh them on these we will carry them in and try them out on Ben's platform scales. Lots of folks are awful finnick about their weights."

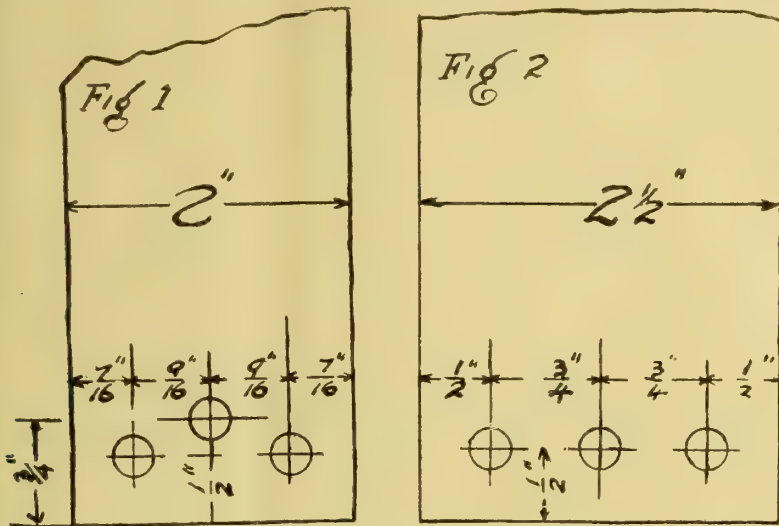
We weighed a dozen or so sacks which the machine weigher had registered at twenty-three bushels. After we weighed them the Old Thresherman figured that there had been an over-run of some twelve pounds which was substantiated by Ben's platform scales.

"That makes about a bushel to the hundred," said the Old Thresherman. "That's a plenty. I used to try to have my bagger overrun three or four bushels on the hundred but I got over that. I figure that if a man sells a bushel of wheat he ought to pay for having a bushel threshed. There are people in this world who let a lot of wheat or oats leak out at a crack in a wagon box between the machine and the elevator and then kick be-

Better Belt Lacing

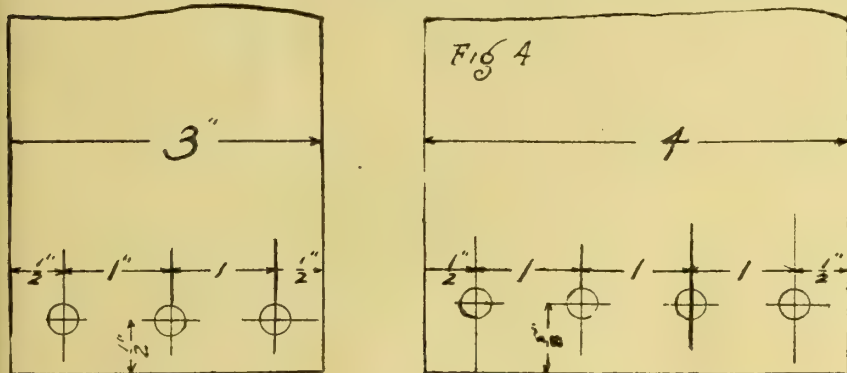
By EARLE W. GAGE

PRACTICALLY every farmer owns an engine, a feed grinder or some other power machine. He should be able to lace a belt properly. To the average man belt lacing always appears to be a very mysterious operation and in threshing time the whole gang gathers around the separator man as if he were a wizard, when he is lacing a broken belt. The methods of lacing



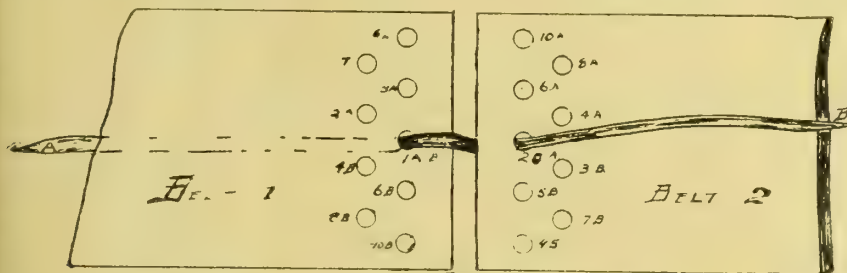
belts are legion and it is impossible to state which is the best, because there are many good ways. This article is not to convert you to use any particular method, but to aid those who have not yet acquired a way. With a very little practice, anyone can "catch on."

First of all, what is our problem? It is to make a smooth joint and one



that will be as strong as the belt itself. The first step is to cut the ends of the belt square. Use a small try square. This is very important. Next is the location of the holes. For small leather belts, one row of holes will be found sufficient and should be spaced with some relation to the size of the belt.

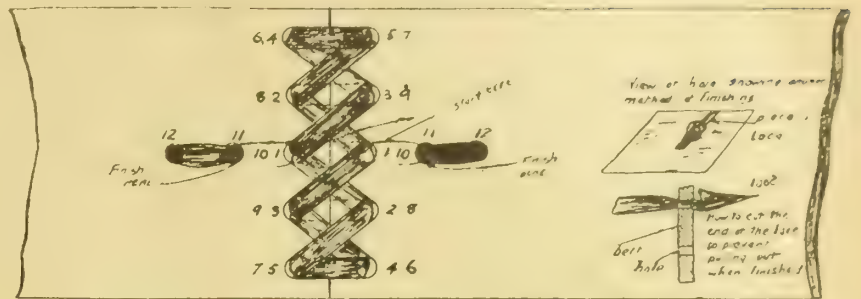
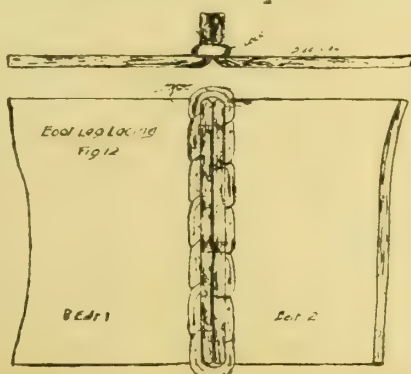
Figures 1, 2, 3, and 4 show a single row of holes in each case. The double



Double Hinge Lace For belts running over small pulleys

row is made by setting the second row of holes just back of the space midway between the front holes, and is especially adapted to rubber and canvas belt lacings. The two other drawings show you how this should be done. With leather belts use a good punch, but for the rubber and canvas belts the hole should be made with an awl and not with a hollow punch, which cuts off many strands and materially weakens the belt. The tine of an old pitchfork makes a very good tool after being properly sharpened a little at the point, the other end being bent to form a handle.

In single lacing methods, the lace should be straight on the pulley side and cross on the side away from the pulley. Starting on the pulley side,



Example of Double Lacing Showing Side of belt away from the Pulley

the ends are put through the holes and then across to the second; third, fourth or fifth holes, where the lace is again put through to the even holes on the other belt end, until finished. There are several ways of finishing. Either a square knot can be tied, or the ends tucked in around some of the other laces. In case the belt runs over an idle pulley, a good way to finish it would be to run from second inside hole, running the lacing back and forth, finishing at the twin second inside hole. This serves to keep the lacing from working loose, as when tied on an outside hole. This method will leave but one thickness of lace in the middle, which will allow the belt to fit the crowned pulley better. Another method of finishing is a loop formed and pushed through the last hole, a short piece of lace inserted and the loop pulled tight. This can easily be removed with a pair of pliers. Burning the end of a lace makes it hard and it can be more easily pushed through the holes.

While the single lacing method is quite easy to perform, the double lacing is a hard nut for many to crack, and I shall go into details a little as to how to do this. The accompanying figure 11 should be used as the chart, the following being the method of lacing:

Between belt 1 and belt 2 and up through hole 2 ; then	
" " 1 " " 2 " " " " " 1 " "	
" " 2 " " 2 " " " " " 3B; "	
" " 1 " " 2 " " " " " 4B; "	
" " 1 " " 2 " " " " " 3B; "	
" " 1 " " 2 " " " " " 4B; "	
" " 1 " " 2 " " " " " 5B; "	
" " 1 " " 2 " " " " " 6B; "	
" " 1 " " 2 " " " " " 5B; "	
" " 1 " " 2 " " " " " 6B; "	
" " 1 " " 2 " " " " " 7B; "	
" " 1 " " 2 " " " " " 8B; "	
" " 1 " " 2 " " " " " 7B; "	
" " 1 " " 2 " " " " " 8B; "	
" " 1 " " 2 " " " " " 9B; "	
" " 1 " " 2 " " " " " 10B; "	
" " 1 " " 2 " " " " " 9B; "	
" " 1 " " 2 " " " " " 10B; "	

Lace A goes between belts 1 and 2 and down through hole 2 ; then	
" " 1 " " 2 " " " " " 3A; "	
" " 1 " " 2 " " " " " 4A; "	
" " 1 " " 2 " " " " " 3A; "	
" " 1 " " 2 " " " " " 4A; "	
" " 1 " " 2 " " " " " 5A; "	
" " 1 " " 2 " " " " " 6A; "	
" " 1 " " 2 " " " " " 5A; "	
" " 1 " " 2 " " " " " 6A; "	
" " 1 " " 2 " " " " " 7A; "	
" " 1 " " 2 " " " " " 8A; "	
" " 1 " " 2 " " " " " 7A; "	
" " 1 " " 2 " " " " " 8A; "	
" " 1 " " 2 " " " " " 9A; "	
" " 1 " " 2 " " " " " 10A; "	
" " 1 " " 2 " " " " " 9A; "	
" " 1 " " 2 " " " " " 10A; "	

This particular lace is recommended for a belt running over small pulleys, such as a windstacker, etc. It is also good for a drive belt. The advantage of beginning at the center of the belt is that two men can lace at the same time, one to the right and the other to the left. However, all laces shown can be started at one side if desired, care being taken not to pull it too tight. One end should not be put through two holes in succession, and both ends of the lace must be passed between the ends of the belt to the opposite side before either is put through the next hole.

What is known as the "bootleg" lace, especially for rubber and cotton belts, does not give satisfaction, and looks bad. Some of the newer methods are far better.

One good plan which will save dollars and breath, is to inspect belts before starting on a run. Go over the belts carefully, cut out the weak spots, in this way far less trouble will be encountered. Should a belt give constant trouble, buy a new one. Before cussing your belt, take a stitch in time. Belts cost three times as much as they did five years ago; hence we might say it pays three times as well.



Runs Easier—Cuts Faster

Two mighty good qualifications in a saw—and two of the reasons why there are so many Atkins in use on the farm today.

For the farmer is a keen judge of saws. He knows there's a difference. The saw that goes through in the quickest time and with the least effort makes a hit with him. And so Atkins is his choice.

The Atkins slogan, "A Perfect Saw for Every Purpose," finely illustrates the scope of Atkins service. Ask your dealer for Atkins Saws.

The insert shows two saws—to the left an Atkins Segment Ground; to the right an imitation. It's not difficult to see why the Atkins principle is right and why it runs easier and cuts faster.

Ask for our free book, "The Saw on the Farm"—tells all about Atkins Saws and Saw Tools.

E. C. ATKINS & COMPANY, Inc.

Established 1857—"The Silver Steel Saw People"

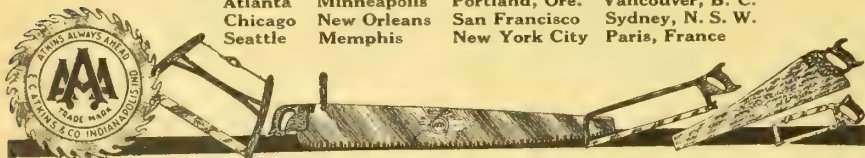
Home Office and Factory:
Indianapolis, Ind.

Canadian Factory:
Hamilton, Ont.

Machine Knife Factory:
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Branches carrying complete stocks in all large distributing centers as follows:

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Chicago	New Orleans	San Francisco	Sydney, N. S. W.
Seattle	Memphis	New York City	Paris, France



Aunt Malinda

SILAS has been promisn' me for the last ten years to get the first volume of "Aunt Malinda" rigged out and dressed up a la mode, but promises, like pie-crust, are made to be broken, it seems, and here it is 'most the end of nineteen-twenty and not even an almanac edition lookin' at the presses.

Of course, it wouldn't make any difference with me if it wasn't for all the folks that I've promised books to long ago and who're looking for 'em. I want to have the last word in straightenin' out the kinks of any book that I've got to stand responsible for and notleave it to any "cut and dried" arrangement of somebody else who don't know what they're talkin' about.

When I mentioned this fact t'other day, Silas 'lowed that the price of paper was up too high for the book-shelves just now and that we'd have to wait a more convenient season for "reachin' out" into book lore.

"Yes," I says, "you've done considerable 'reachin' out' in days past and gone. I mind the time," I says, "when a fellow traded you ten thousand copies of Kendall's Spavin Cure, for advertisin' space, back in Indiana, in your first newspaper venture. I wondered if you'd be able to cure ten thousand spavined horses from a circulation of six hundred bona fide paid subscribers, and if you thought that quantity counted more'n quality, and I suppose you're comparin' my truck to spavin remedies."

Silas gave every subscriber a copy of Dr. B. J. Kendall's celebrated healin' sovereign cure for the ills of all horse flesh, but he took in too much territory. You can't give all your friends a copy of a book and then expect the market to run towards the bulls on that particular book, and Silas found this out to his sorrow. There was a generous distribution of Jayne's and Radway's almanacs that year and folks seem to be interested more in tapeworm antidotes than in how to cure bots in horses. Of course, if Bill Campbell had been on the job, 'way back there, he might 've helped Silas out on peddlin' recipes for spavin and removin' thoroughpins, as well as overcomin' the asthma that prevails among horses and makes 'em what Bill calls "a little weedy," but Bill was hardly out of his short pants when Silas got the copyright on spavin cure.

As I was sayin', if Bill had been snookin' with Silas and the cards had been "running" his way, we might 've been runnin' a veterinary emporium instead of a threshermen's magazine. Anyhow, Bill would 've come in handy towards the close of a perfect day, for Bill's the coroner and Silas had use for one the day he turned the column rules and wrote his own obituary, put out the fire and called the dog, editorially speakin'. When Silas let down the bars and drove the animals out of the pasture the last time, he had nine thousand and thirty-six copies of Kendall's Spavin Cure on hand, and old B. J. Kendall holdin' a due bill for the rest of the advertisin'.

When Silas hobbled down to the train that took him out of Colfax, with his beard lookin' like the tail of a comet, and a buzzard or two circlin' close to the ground, a couple of his cronies back in that dinky little burg escorted him to the train to bid him God-speed, and one of 'em slipped Silas a neat lookin' little package all wrapped in tissue paper, 'lowin' that he might find some interestin' readin' that'd help while away the time between Colfax and Madison. When Silas had settled down in the train as it sped on towards Kankakee, he opened the package and there was a copy of Kendall's Spavin Cure and a sample bottle, with a note from Ben Hayden, the druggist, tellin' him to rub it on well before goin' to bed. Silas was as hot as a pepperpod, but on thinkin' it over he 'lowed that if that wasn't rubbin' it on it was certainly rubbin' it in.

But there'll be no spavin cure about this book of mine if we ever get it goin'. We might make a deal with William Henry Ford to advertise a recipe for "crippled flivvers," but there'll be no horse play about it.

Charley Doring has offered to take a page to advertise a recipe for makin' new threshin' machines out of old ones by usin' a little Spanish brown for filler, and old Hugh Harter wanted me to mention his milkin' machine editorially, but I told him that while he might be in the right church he was certainly in the wrong pew; that it was a part of Silas's religion to use milkin' machines but these applied more to men than cows and to greenbacks more'n to lacteal fluid, of which Hugh Harter's machines are supposed to draw a full hand.

Speakin' about "full hands,"—well, I'll tell you some other time what I overheard Bill Campbell tellin' Silas; how he slipped up on a "full hand" a spell back, when he encountered four of a kind in another fellow's glove. I'm satisfied that this took place before Bill got religion when he joined the Shriners, for Coroner Campbell acts more like a deacon in church now than in the days when he used a lantern in the dark of the moon to guide "poor and weary pilgrims" to a place of shelter. Silas and Bill have been guidin' stars in their times, but it wasn't in the capacity of ushers in church, and you can hazzard your last bean on it.

I'll have that book published or I'll raise a family row tryin'.

GANDY
Thresher BELT

Hard work in rain or shine—that's what GANDY'S built for

THE GANDY original stitched cotton duck THRESHER BELT is made of strong, closely woven cotton duck, specially folded and welded together by close lock-stitching and seasoned in oils by a secret process. It is the result of more than forty years' study of traction power coupled with quality material and unexcelled production facilities.

The GANDY THRESHER BELT is built to deliver power wherever needed.

Our engineering department stands ready at any time to advise you on any power transmission problems.

To be sure of the genuine
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749 West Washington St. Chicago, Illinois

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THUBAN COMPOUND



HARVESTER OIL



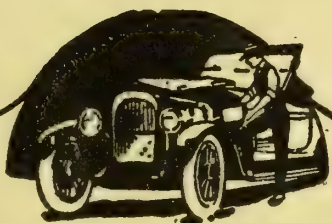
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When the temperature drops,
use a lighter oil

TEXACO

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Texaco Motor Oil

The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



Winter is coming on. Your tractor will be chilled. A change of oil will be needed, for, while the terrific heats and long grind of summer require a heavy oil, in winter you need one which will not thicken in the cold. Oil must flow freely. It must not be sluggish in the lubricating system and it must permit easy cranking.

There are three grades of TEXACO TRACTOL—"B," "C," "D,"—these will take care of all tractor engines—large or small—in summer or winter. Grade "B" is in-

tended for large engines in severe summer conditions. Grade "C" for large engines in winter. By winter, frost temperature (about 40°F) is understood. For smaller engines Grade "C" is used in summer, while Grade "D" is recommended for winter use.

TEXACO TRACTOL is shipped in 55 and 33-gallon steel drums, wooden barrels and half-barrels, and five-gallon cans. Try it. "You'll see a difference"—*now* in power, and *later* in your bearings.

THE TEXAS COMPANY

Petroleum and Its Products

CHICAGO NEW YORK HOUSTON
OFFICES IN PRINCIPAL CITIES

"There is a Texaco Lubricant for Every Purpose"



Remove a stump as quickly as you'd milk a cow

To remove and break up a big, tough stump in such a short time would seem almost impossible. Yet Dean Johnson, of Netherlands, Mo., did it the first time he tried Atlas Farm Powder.

"Within ten minutes from the time I started work on the first stump I had it out in pieces that I could handle easily, although I had never done any blasting before."

Our book, "Better Farming with Atlas Farm Powder," gave Mr. Johnson all the information that he needed. After reading it you should be able to take out stumps as fast as he did. Write and get your copy of this book, which also tells how to use Atlas Farm Powder for breaking boulders, planting trees, making ditches, etc.

ATLAS POWDER COMPANY
Division AT-5, Philadelphia, Penna.

Dealers everywhere

Magazines near you



Mention The American Thresherman and Farm Power

Organization

J. B. Parker, the old war-horse of threshermen organizations, recently received a letter from his friend, Albert Smith, secretary of the Missouri Threshermen's Association. In this letter Mr. Smith announced that a new state secretary had arrived at his home, the same being a fine baby, Lee Donald Smith. Both mother and baby were doing nicely at last account.

Wisconsin threshermen living in the northern part of the state will find it worth while to attend the State Corn and Grain Show in La Crosse, next February. For nineteen consecutive years this has been held in Madison, so the northern brothers should keep the date in mind.

The Ohio Threshermen's Mutual Insurance Association will hold its annual convention in Columbus, January 20, 1921. The Brotherhood convention will be held at the same place on the two days preceding—January 18 and 19. The hall to be used for convention purposes has not been decided on. The Ohio brothers will do well to get in touch with Mr. George Durban, secretary, Hilliards, Ohio, as he can secure hotel reservations convenient to the convention's hall.

Our Managing Editor, V. V. Detwiler, had a good visit lately with Joshua Bohannon, who heads the Kentucky Association.

Missouri expects to "show the rest" at her next state convention. Seven counties now have their individual organizations: Holt, Linn, Callaway, Clinton, Schuyler, Marion and Lewis. Missouri also expects to have a good bunch of representatives at the Chicago National Convention. If any threshermen are thinking of organization for their county, Mr. Albert Smith, Durham, Missouri, is the man to whom they should write for particulars.

Already the officers of the Oklahoma Threshermen's Association are preparing for the annual convention, to be held at the Huekins Convention Hall, in Oklahoma City, on January 21-23, 1921. Over five thousand special programs will be printed and mailed to the threshermen of the Southwest.

John A. Scott, president, deserves real support, not only from threshermen but from tractor owners and dealers. He has been instrumental in getting rulings from the attorney general of his state that has saved thousands of dollars in taxes to own-

ers of tractors and engines; and he has furnished these owners with summaries of these rulings.

A Friend of Ohio Threshermen

This letter is of importance to threshermen of Fairfield, Hocking, Athens, Morgan, Washington and southern Noble and Monroe counties of Ohio. It concerns I. M. Blausner.

Mr. Blausner is the daddy of our present road law which gives the threshermen the same rights upon the public highways as anyone else. He has been a Representative from Fairfield County for two terms, and has proved himself a friend to the threshermen and also the farmers. He has assisted us in defeating several bills which would have been detrimental to the threshermen and farmers as well, in his two terms as Representative to the General Assembly. Now he is a candidate for State Senator in the district of the Ohio counties mentioned. For the good work that Representative Blausner has done for the threshermen, we feel that he should have our support, no matter what our political views are.

GEORGE DURBAN,
Hilliards, Ohio. *Secretary.*

Worn Screens and Sieves

BY J. CROW TAYLOR

One of the difficult things to patch up and get satisfaction out of is a worn screen or sieve. This applies both to woven wire and to perforated sheet metal. When screens begin to show tears and holes and worn spots here and there, the best general answer is to replace with new ones. Patching generally means impairing the efficiency of the screen. Also, generally when a screen begins to give way it means that it is pretty well worn all over and will soon be giving away in other spots. There are rare occasions where an accident may cause a tear or a break in a screen but little worn which can be repaired, but when screens and sieves begin to need repairs because of actual wear in service they need replacing with new ones.

One View of It

The very little boy and the tiny girl will fight like young fiends. The lad thinks it perfectly proper for him to slap the lassie and yank her hair, and she feels no shame when she kicks his shins and sends him home howling. Later along they "go with" each other, and regard with horror the awful irreverence of even contradicting each other. After a while they wed, and presently begin fighting again.—*Judge.*



THE company that makes the hearts of three thousand threshermen of Indiana, Illinois and Kentucky glad this year because it gives them the best Workmen's Compensation Insurance for less money.

The company that makes the hearts of several hundred injured workmen glad, because it sends them checks when they are unable to work.

The company that makes the hearts of many thousand farmers glad, because, when they hire a thresherman who has insurance in this company, they are fully protected and they know they will not be required to defend a damage suit or pay for an injury which one of the thresherman's employes may receive while threshing on their farm. They see the card on the side of the machine.

Now operating in Indiana, Illinois and Kentucky.

Threshermen of other states will be added to the list just as fast as possible, but not until the company's report and method of doing business have been filed and approved by the Insurance Department of their state. This report will show that the company is financially able to pay for any and all accidents covered by its policies.

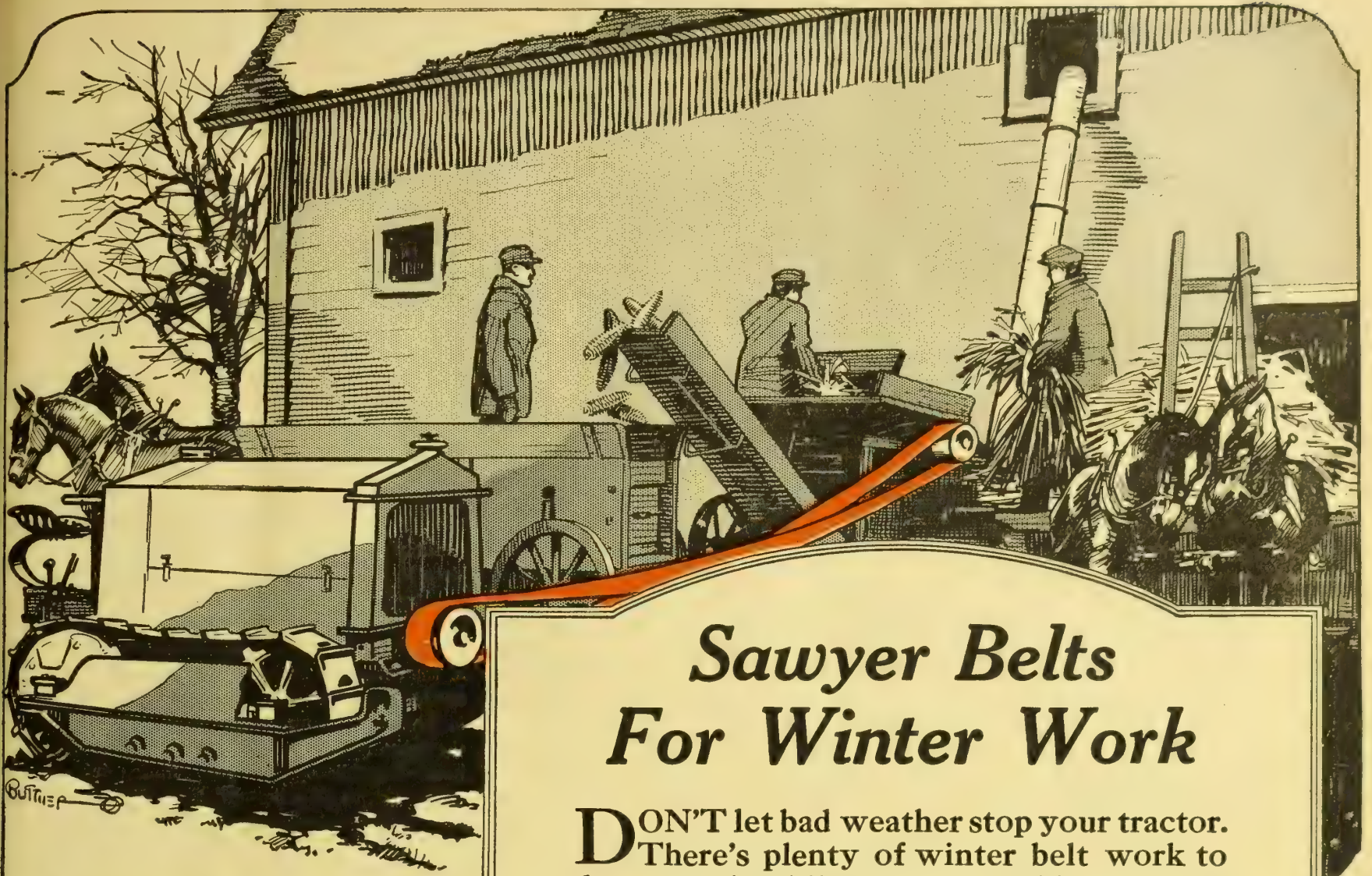
YOU WILL BE GLAD TO HAVE THIS NAME ON YOUR COMPENSATION INSURANCE POLICY.

WHAT OTHER NAME WOULD MEAN THAT DIVIDENDS ARE RETURNED TO YOU?

DO NOT FAIL TO WRITE FOR RATES AS YOUR STATE MAY BE THE NEXT THAT IS ADDED TO OUR LIST.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY
624-625 OCCIDENTAL BUILDING
INDIANAPOLIS, IND.

Mention The American Thresherman and Farm Power



Sawyer Belts For Winter Work

DON'T let bad weather stop your tractor. There's plenty of winter belt work to do—corn-shredding, stone-crushing, sawing wood, etc. Experience has proved that *Stitched Canvas Belts* keep tractors working the year 'round.

For 30 years power-farmers and threshermen have chosen the Sawyer Belt for its real worth. It stands up under the worst weather conditions—resists wear and moisture—has no seams to rip.

Slip a Sawyer Belt over the pulleys and make your engine or tractor earn for you right through the Winter.

Ask for the genuine *Sawyer Stitched Canvas Belt* stamped with the "U. S." seal. We recommend *Sabeco Belt Dressing* and pack a liberal sample with each Sawyer Belt. Good dealers carry both, also the full line of U. S. valve packing, hose, rubber belting, etc.

United States Rubber Company



Standard for
over 30 Years

SAWYER TRADE MARK *Endless stitched canvas Belts*
REGISTERED

The American Thresherman and Farm Power

B. B. CLARKE, Editor
V. V. DETWILER, Managing Editor

MARK G. TROXELL, Associate Editor
FRANK M. CLARKE, Associate Editor

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A PAGE WITH THE EDITOR

HERE are some facts for our readers which are worth considering. Do you know that the price of paper such as is used in this publication is from twelve to eighteen cents a pound at this time in the open market? For the year 1920 the combined weight of the twelve issues of this magazine will be at least eleven pounds. The paper for these issues would cost in the open market today one dollar and ninety-eight cents.

If you will add wrappers and postage to this cost, you will see that the two dollar mark will be reached for each subscriber, for nothing more than paper, wrapping and postage. From this, if you will consider the other costs necessary to produce this magazine, you can easily understand that you are receiving more than two dollars for each subscription in actual cash, and it is not a very hard matter to understand how well we have fared in the transaction.

We have been forced to curtail every inch of space, not because of this high cost of production alone, but because it has been a question of being able to get the paper upon which to print the magazine at any price. This serious condition has now passed, and by the strictest economy we will be able to pull through without disappointing anybody, although we were handicapped for sample copies for our fair work.

With these conditions confronting us, there can be no concessions in price of subscriptions, excepting for subscribers for a term of years. Until further notice the subscription price will remain at one dollar a year, three years for two dollars, or five years for three dollars. These concessions are for the purpose of saving in circularizing, notices of expirations and stenciling of names, all expensive items.

If our readers could fully understand what a help they could be by sending us a correct list of prospective subscribers, especially threshermen and farm power users, with correct post office and rural routes, when writing or with their own subscriptions, they would not hesitate to do so. It would require but a moment's thought to write the names and addresses of half a dozen neighbors who would be benefitted by this cooperation, and you

can hardly estimate the help it would bring. It is for the very purpose of gathering and compiling lists of this kind that we have offered the inducements heretofore made. These lists are of great value to us and enable the subscription department to obtain that which otherwise costs us heavily. With these facts frankly stated, how many of our readers will render this service before the holidays? Do it now, and help us to help you in the good work.

MAKE your settlements as you go, and therein make friends instead of enemies.

WHEN folks abuse you and call you hard names, examine yourself; it may be true or even worse.

THERE was never a time when real young men were needed so much as right now, needed on the farm even more than in the cities.

SHOULD not the threshermen of the United States feel proud of what they have accomplished in many ways during the past ten years, and especially in having founded insurance companies of their own which gives them protection against fire, injury to employees and otherwise?

THE automobile has been the greatest educator of mankind of any invention within the last century, and without it we would be ruined. It has likewise caused more deaths, more thefts, more highway robberies and more depravity than all other machines combined, by being used illegally and recklessly. Notwithstanding all these facts, who wants to do without an auto?

THE women have at last been allowed to vote in all the states, and there will be great confusion at the polls this year because of the lack of knowledge concerning just how to proceed in those states which have recently become civilized enough to concede that women are about as capable of knowing what to do and how to do it as the men. But many men with all their brilliancy are as dumb as oxen at the polls, and have to be instructed what to do, so it is not questioning the intelligence of women when we suggest

that they begin now and become familiar with the requirements of the law in all things. Then, let every woman on the farms and in the country homes who can possibly get to the polls, go and vote. Vote to put an end to the wasteful and un-American-like extravagance which we have had to endure for several years. Vote to begin a business administration of the country's affairs. The Editor cannot be accused of being an ultra partisan, for he has voted for many men in both of the great political parties, in fact, voted both Republican and Democratic, in years past, as he believed it to be for the best interests of the country, and that is just what he is going to do this year. But, whether you vote as the Editor votes or not, as American citizens go and vote as your conscience dictates, regardless of how anybody else votes. Vote early and vote right! Women, you know, were supposed to be first made out of a rib of man, and man's ribs are about the crookedest part of him, but woman, you know, has had much to do in redeeming man from his crookedness, and we hope that it will be so at the polls.

THE season is now drawing to a close, for your threshing outfit, your clover huller and other heavy farm machinery. These machines have cost more purchase money than ever before, and they represent a considerable portion of your capital in many cases. Therefore you owe it to yourselves first, brethren, to clean and put them in good condition for the winter. In no case should expensive machinery of this character be left unsheltered. It will cost more in depreciation than the price of housing.

If the machinery has been paid for, you realize how much toil and expense it has cost you to make this possible, and you owe it to yourselves first, to take care of this amount of your capital stock, and, if not paid for, surely you owe it to your creditors to protect them by taking the very best of care of your machinery, that it may not only pay for itself but earn you a reasonable profit in the years to come. If you properly house your machinery it will cut the cost of repairs wonderfully when you are getting ready for next year's run.



Built for the Belt

The Rumely OilPull tractor is especially suited for belt work.

The belt pulley is unusually large, is driven directly off the crankshaft with no bevel or intermediate gears and is placed on the right hand side, well up, so that the operator has a clear view and can line up, start and stop the pulley from the seat.

The speed regulation of the OilPull is closer than in any other tractor—as close as the best steam engine ever built. It is governor controlled—the speed of the engine automatically and instantaneously regulated to meet every change in the load. It automatically holds the belt at the correct speed all day—no speeding up or slowing down as the loads varies.

It has a shifting front axle—plenty of belt clearance with no sacrifice of design or construction.

In fact, it is fully as well adapted for belt work as for drawbar work. Guaranteed to burn kerosene at all loads and under all conditions up to its full rated brake horse power. Cooled by oil—the radiator can't freeze nor can it boil. And, remember this, the OilPull has twice established the world's tractor fuel economy record.

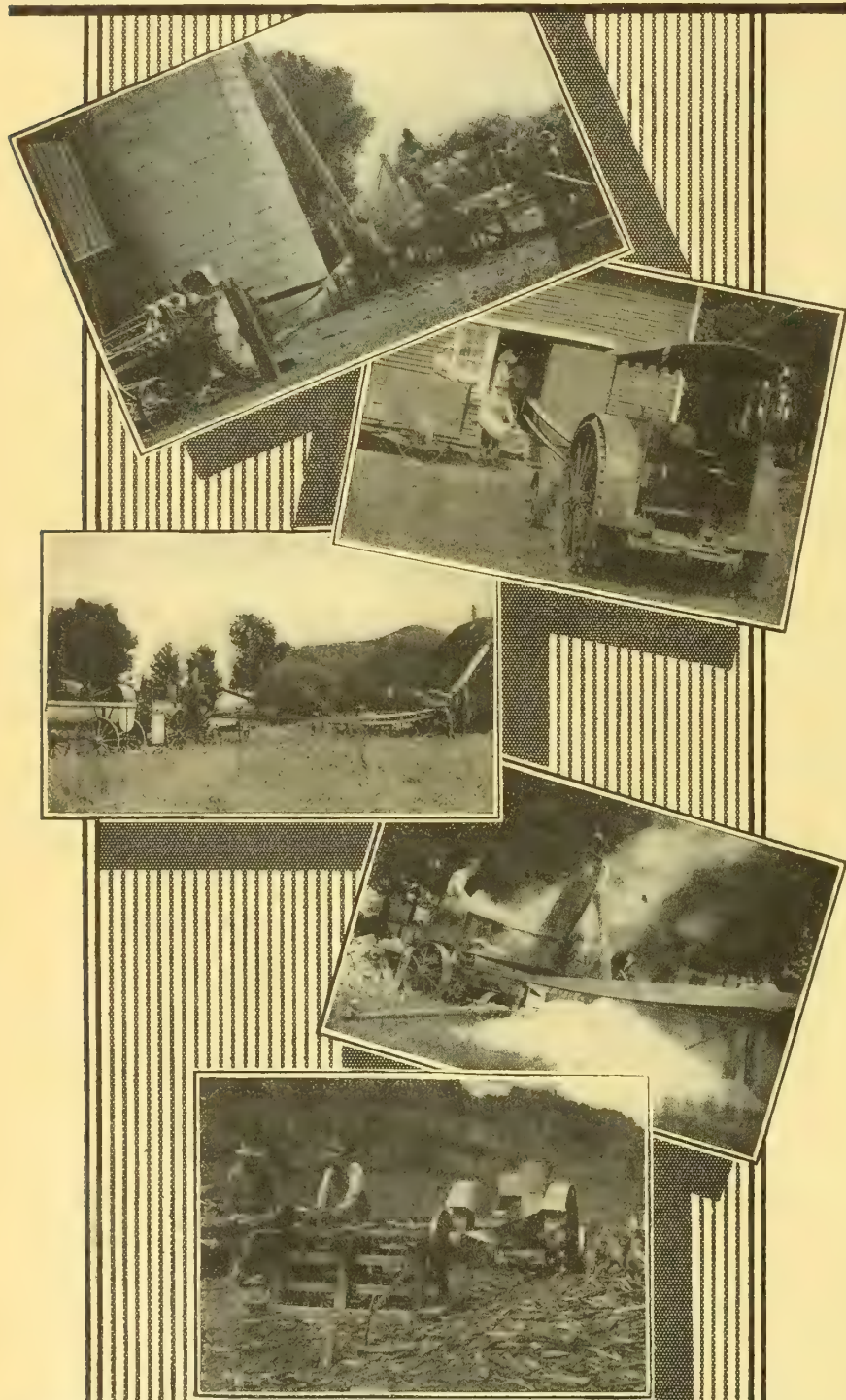
See your Rumely dealer or have us send you literature describing all four sizes of the OilPull tractor.

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LaPorte, Indiana
29 Branch Offices and Whouses



ADVANCE-RUMELY

Hettrick Canvas Belts



Buy Your Belts by Name

You should know the name of the belts you're using. It's important to you. If you don't, what come-back have you if perchance the question of adjustment comes up?

Buy your belts by name just as you buy your tires. Buy Hettricks for your winter belt work. And you've tied up with a good name—a good canvas belt.

Hettrick Manufacturing Company
Toledo, Ohio

Asked and Answered

Question of L. S. I have an 8-16-horse power engine that is very hard to start, and it does not run well after it is started. It is inclined to pound and to heat up quickly. Is there any way that the radiator can be cleaned up so that the water can go through it?

Answer.—We are inclined to believe that your engine is badly carboned and that possibly the cooling system is scaled up. Probably if you remove the carbon from the cylinder and clean out the cooling system your trouble will, to a great extent, be overcome. If your engine is so constructed that you can remove the cylinder head, it will be very easy to get at the combustion chamber and remove the carbon. If you do not have a removable head, it perhaps will be necessary for you to remove the piston, and you will not have such a convenient chance to work in the combustion space in scraping out the carbon.

If your ignition is properly timed and your compression is good, it is very probable that your radiator is dirty, causing the heating. I suppose that the outer surface of the radiator is clean because this cleaning is easy to do and would be one of the first things you would see to when heating occurred. Possibly, if you have been using hard water the inside of the radiator has become somewhat scaled with lime. Very often a mixture of common baking soda in water is used to soften and remove this lime scale. Mix one-half pound of the soda in four gallons of water, drain the cooling system, rinse it out and then fill with the soda water. Run the engine now until this solution has been circulated through the cooling system several times. Now draw off the soda solution and fill the cooling system with clean water. Run the engine so as to circulate this clean water several times and then drain the cooling system again filling with clean water. Sometimes a half pound of lye to five gallons of water is used in place of the soda. This treatment should remove the scale which has formed on the inside of the radiator and do away with the heating if heating is due to a dirty cooling system.

Question of W. N. I have a 25-horse power engine. Why do I use more coal and water than my neighbor threshermen? I use seven thirteen-barrel tanks of water a day. I have no leaky flues, and sometimes it keeps an injector working all the time to hold the water. This is true if I am threshing Marcus wheat when it is cloudy. The cylinder seems to be in good condition and smooth, and the

rings fit well. There does not seem to be any leak there. I have a very wet exhaust. I burn from five hundred to eight hundred pounds more than other threshermen burn to do the same work.

Answer.—There are several causes that may make an engine use too much water. If the valve is set wrong, that is, slipped on its stem, the engine will do nearly all of the work on one stroke and the steam will not be used expansively, and hence it will take a great deal more than if the valve is set properly. This fault sometimes may be detected by running slowly with a heavy load and listening to the exhaust. If it exhausts harder on one stroke than on the other, the valve is not set right. If you turn the engine over by hand and the valve uncovers one port much more than the other, it shows that the valve has slipped. If this is not the case and the lead is excessive when the engine is on dead center or there is a lack of lead, it shows that the eccentric has slipped. If the valve or valve seat is cut or grooved so that steam can blow through to the exhaust side, the engine will take too much steam. If the piston rings are worn and do not fit tight, steam will blow through. If the piston or cylinder is cut or grooved, steam will be lost. Leaks of steam or water at any place about the engine or boiler, waste a good deal of water even if they are quite small. Excessive friction at any place about the engine, requiring so much extra power that the engine cannot be hooked up, may be another cause of difficulty.

Question of A. E. A. I should like to have your opinion in regard to the depreciation on a threshing machine outfit. It is owned by five farmers, and they figured that the depreciation the first year would be fifteen per cent, the second year ten per cent, and the third year five per cent. I will admit my head is rather thick, but it seems to me it would be more like it if they reversed the figures, five per cent for the first year, ten per cent the second year, and fifteen per cent the third year.

Answer.—Figures we have compiled show that the average threshing rig has a life of about eight to ten years. We would say that in figuring the depreciation, it would be wise to figure twelve and one-half per cent for each year.

There is some justice in the idea of arranging the depreciation figures so that more will be figured off the first year than the following years, because if you wish to sell the machine its selling value will depreciate more the first year than in the years after

Firestone

EXTRAVAGANCE has gone by the board. Thrift is in the air. Men are buying where the value is.

The Firestone thrifty $3\frac{1}{2}$ is leading the small-tire field today. Because it is built on real thrift methods from start to finish.

Firestone experts on the spot in the raw material markets of the world are able to get first choice of quality at quantity purchase prices.

Firestone men have worked out the way to produce this tire by concentrated methods—no waste material, no waste motion, no waste space.

And Firestone volume output, through thousands of dealers, permits selling at a close margin. The user gets the benefit. Try this Firestone thrifty $3\frac{1}{2}$.

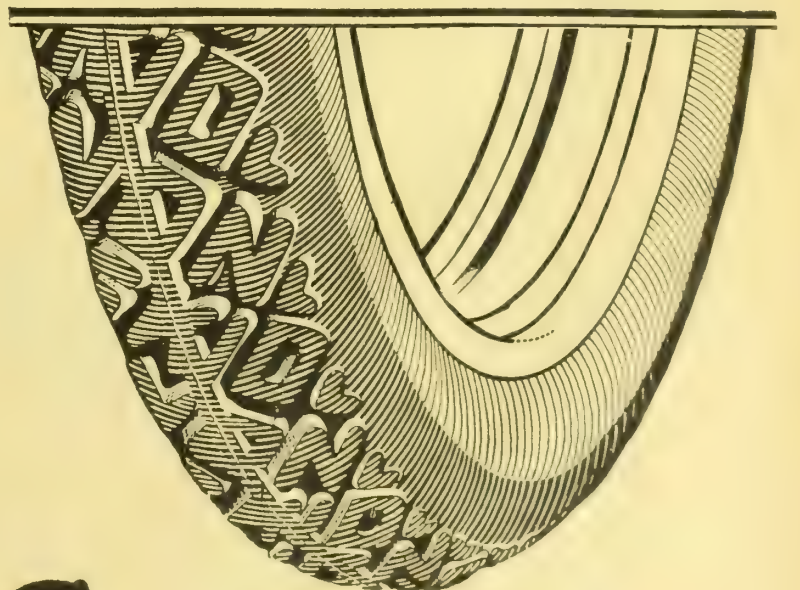


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Gray Tube \$3⁷⁵
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Most Miles per Dollar

"NORMA" PRECISION BALL BEARINGS

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Some things are so unalterably good, so inescapably essential, as successfully to resist even the cheapening effect of low-priced competition. With the passing of years, the demand steadily increases for "NORMA" Bearings—an inevitable result of the steadily increasing demand for the high-grade magnetos and lighting generators in which "NORMA" Bearings are standard.

See that your Electrical
Apparatus is "NORMA"
Equipped.

THE NORMA COMPANY OF AMERICA

Anable Avenue
Long Island City
New York

that, even though the machine itself does not show much wear. You will readily see this when you think that if a man buys a secondhand machine, even though he considers it to be practically as good as new, he expects to get it at considerable less than he would have to pay for a new machine. If he does not consider it a bargain, he will buy a new one.

Question of E. H. B. I am using a 15-horse power engine equipped with two injectors, No. 4 and No. 2 U. S. Automatic. I put on the No. 2 recently. It had been in use some time before I put it on. The No. 2 will work up to one hundred pounds pressure, but when the steam pressure goes above one hundred pounds the injector refuses to work unless I open the drip cock at the bottom of the injector, which sometimes will start it. What suggestion can you make to me?

Answer.—It is very possible that the injector you mention was made to work at low steam pressures. If it works well until the pressure is up to one hundred pounds and then refuses to work at higher pressures than this, we should suggest that you send the injector back to the manufacturers and have them make changes in it that may be necessary.

When sending the injector back, you should tell them what steam pressure you wish to use it at. Your injector is made by the American Injector Company, Detroit, Michigan.

Question of R. L. I wish to buy a grain separator and do not know what kind to

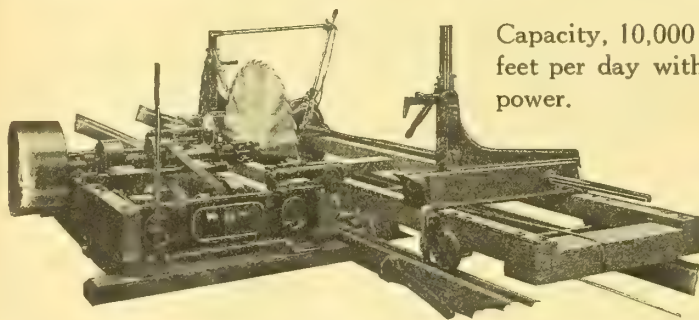
get. What make would you suggest for me to get that will do clean threshing and give good satisfaction?

Answer.—Grain separators have become so well standardized that as far as we know there is not a single make of grain separator on the market that will not do excellent work if properly handled. Personal opinions differ, of course, as to which is the best. One man will be radically in favor of one make and another man will be in favor of another make. I should not therefore care to designate any certain make of separator to you as the best to buy. We should suggest that you write to a number of the companies whose advertisements you see in our magazine and get literature. As you compare the different catalogs you doubtless will decide in favor of some particular machine as being your personal choice, and no matter which one you get, if you are careful in operating it you should get satisfactory service.

Estimating Boiler Feeding Power

BY F. H. SWEET

DIXIE "E" SAW MILL

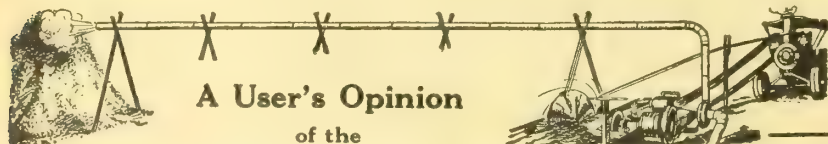


Capacity, 10,000 to 25,000
feet per day with 25 horse
power.

We make a
full line of
high grade
mills of all
capacities,
in fact, any-
thing need-
ed for saw
mill or wood
cutting.

HILL-CURTIS COMPANY

1504 North Pitcher Street, Kalamazoo, Mich.



A User's Opinion
of the

CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower, as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs.

Yours for business,
C. S. LONG, New English, Iowa, R. D. No. 1, Box 40.

The letter explains itself. This man's blower has worked unfailingly for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO

A SIMPLE way to arrive at the energy, or power, required to feed a boiler with water is first to ascertain the height, in feet, of a column of water or standpipe that will balance the steam pressure in the boiler. This is done by multiplying the steam pressure by 2.3. This multiplier is used because for every 2.3 feet in height a column of water will exert one pound of pressure per square inch at its base. Therefore, if the pressure in the boiler is, say one hundred pounds, it will support a column of water $2.3 \times 100 = 230$ feet high. Then a pound (weight) of water elevated to this height in a column pipe connected to the boiler would cause a like amount to flow into the boiler. Therefore the pounds (weight) of water fed into the boiler multiplied by the height in feet it would have to be elevated (to the top of the column pipe) to produce head enough to cause it to flow into the boiler gives the "foot pounds" of energy per pound of water fed. To get the horse power expended, of course the time element, or the rate of feed, enters in. The foot-pounds of energy expended per pound of water fed multiplied by the number of pounds fed per minute and divided by 33,000 gives the horse power.

Suppose the boiler-feed pipe has a tee fitting in it just as it enters the boiler, with one opening "looking

up," into which the column pipe is connected; then the water from the pump would go directly into the boiler after the required "head" was reached in the column pipe. A correct pressure gauge might be graduated to show either the height in feet of the column of water, or the pounds pressure, or both. The column pipe can therefore be dispensed with and the gauge reading used instead, and if the gauge reads pounds pressure, its reading must be multiplied by 2.3 as explained, but if it reads in feet head, its reading is used for the "feet" and the "pounds" is the weight of water fed (giving "foot-pounds").

It becomes an interesting diversion to calculate the power represented by the feed water entering a boiler serving, say, a 100-horse power engine. If the engine takes thirty pounds of steam at one hundred pound gauge pressure per horse power hour, the energy expended in feeding the boiler would be $100 \text{ horse power} \times 30 \text{ (pound)} \times 230 \text{ (feet)} = 100 \text{ (horse power)} \times 30 \text{ (pounds)} \times 230 \text{ (feet)} = 690,000 \text{ foot-pounds per hour, or } 11,500 \text{ foot-pounds per minute. This is only about one-third horse power for the actual work represented by the water entering the boiler, which is, of course, a great deal less than the total power applied to the pump in overcoming friction and other losses.}$



This reproduced photograph of a broken piston shows how lubrication systems using oil again and again, cause carbon accumulation in the piston grooves to such an extent that in certain cases the piston top itself has been known to crack and break.

Preventing Tractor Troubles Caused by "Under Ring" Carbon

Broken piston rings, scored cylinders, and even broken pistons are frequently caused by carbon in the piston ring grooves of tractor motors.

This "groove" carbon accumulates because used oil, gummy and laden with sediment, is forced into the cylinder by ordinary methods of lubrication.

It gets behind the piston rings, prevents them from adjusting themselves to the cylinder, and thus causes the rings to break and the cylinders to be scored.

Sometimes the piston head itself is cracked off because of the effects of this "groove" carbon.

With the Madison-Kipp fresh oil system, using oil but once, these troubles are avoided.

Because it forces fresh oil in gauged quantities, directly onto the sides of the piston where it is needed, without splash, less carbon accumulates in the grooves.

The ring breakage, cylinder scoring, loss of power, and undue wear directly due to certain phases of used-oil lubrication are thus avoided.

This advantage of the Madison-Kipp Fresh Oil System is, of course, only one of a number whose benefits have for many years been known to tens of thousands of tractor users.

Others are a saving of fuel frequently averaging 13½%, an increase of power often averaging 15%, and a saving of oil running as high as 83%.

Since Madison-Kipp Fresh Oil Systems are actually a part of the motors they serve, the only way in which the tractor user can secure the savings and freedom from trouble that they provide is to buy the tractors of the manufacturers who send out their tractors Kipp-Equipt.

These tractors cost no more and are worth much more.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators

***Fresh
Oil
Systems***

SEEDS

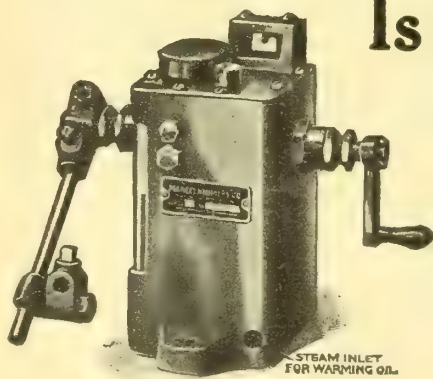
When you have Grass or Field Seed to offer, send us your samples.

Our unexcelled facilities for cleaning, grading and shipping, furnish sellers exceptional opportunities for marketing supplies.

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The Albert Dickinson Company
Minneapolis Chicago

An Oil Pump That Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H. P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.

311-313 Babcock Street

Buffalo, N. Y.

Women's Department

At the "Sign of the Smile"

We're weary a-walking the highway of life;
We're fretted and flustered with worry and strife.
Let us drop by the wayside the heavy old load,
And rest at the inn at the turn of the road.
Let us tarry a while
At the "Sign of the Smile."

At the "Sign of the Smile" we will linger long
there.
For the strictest of rules is the ban upon care,
And the guests may forget there are such things as years,
And never shed any but laughter-brought tears.

Let us tarry a while
At the "Sign of the Smile."

There'll be flagons of jollity for us to sip,
And many and many a rollicking quip,
Though the jokes may be old, like the juice of the vine,
Let us laugh and make merry—no cause to repine.

Let us tarry a while
At the "Sign of the Smile."
—Exchange.

Save Those Steps

AUNT SALLY.

"I do wish I could learn to do things with as little work as you do, Aunt Sally!"

It was my niece, Ann, who had recently gone into a home of her own, who made the exclamation. She was visiting me for the day and we were sitting down for a bit, before serving the mid-day meal to our five hungry men. Bob, Ann's husband, had come over with his hired men, to help move the tool shed, and, of course, Ann had come along to help me, in the house, and to have a wee visit, as well.

There was such evident sincerity in her tone, as she looked around the clean kitchen, that I decided to try to help her learn some of the lessons that experience had taught me. To be sure, one can never "learn" a lesson for another and seldom enough does one succeed in "teaching." The very best that can be done, is to point the trail along which gleanings of wisdom have been found. But the "gleaning" each must do for himself. So I replied:

"I really spend much less time, my dear, in *doing* work than in *saving* it. Probably a good deal depends on the habits one has formed, but it is easier for me to save steps than to take them."

"That's just it," Ann continued, "I seem to have so many more steps to take than you do and I cannot see why. My kitchen is new and certainly convenient. Yet if I had to to have dinner ready for half a dozen people, as we have now, my kitchen would look like the path of a cyclone and I would be tearing around, fifteen minutes before the dinner-hour, like a hen with her chicks all in the water, instead of sitting in a comfortable rocker, as you are this minute, looking placid and cool!"

"I think the whole matter hinges on two things, Ann dear, orderliness and motion-saving. And I have studied those two things until I certainly ought to show some proficiency in them. Perhaps I should never have done it but for the fact

that I simply had to. You were not old enough at the time to remember anything about it, but for three years I was practically an invalid. In fact, I have often thought that things would have been easier for me if I had been positively bed-ridden. For then, someone else would have assumed control of my home. But we could not afford competent help in the kitchen and I *could* do a certain amount, so with husband's help, I managed affairs in my house. But it hurt me so much to see him set about, in awkward, fashion, to wash a big pile of dirty dishes, and otherwise straighten the house, at night, after a full day's manwork in the field, that I tried, oh, so hard, to have as little left for him to do as possible. In trying to save work, I found how interesting the thing was, until I really made a game of it and schemed every way possible to do things in the simplest fashion and with the fewest motions.

"You would be surprised at the number of changes I made, each of them so simple as in itself to seem unimportant, but the whole of them meaning the saving of many, many steps and other motions, which my poor body was unable to make. For instance, the drainboard in the sink was on the right side, as most drain boards have a fashion of being. The movement of twisting my body and crossing my left hand, that naturally held the washed dish, over the other, to set said dish on the drain board, gave me a twinge of pain each time. So I had the drain board changed to the other side! I had read many times about sitting, instead of standing, to do work, and had practiced it a little. But sitting to wash dishes seemed out of the question. But when I could sit with a fair degree of comfort and no bodily injury and could not stand, I soon learned to draw up my stool (which husband had sawed off to the right height for sink, table and stove) and wash dishes. It seemed a bit awkward at first, but not half so awkward as it now seems to stand and stoop over at the work. The same proved true with preparing vegetables, and the countless other things one does at a sink. Cakes were stirred, while seated on my stool drawn up to the kitchen cabinet, bread was moulded, pies and cookies made. But sitting was only one phase of the game. Saving was equally as important. I decided that a kettle cover that had been used to cover a boiling pot of water (for potatoes, etc.) and was merely steamy, could be wiped at once when removed, while it was hot and would almost dry itself, and placed in its proper place, instead of adding to the disheartening pile of dirty dishes to be washed at the close of the

Here's the Aultman-Taylor Tractor Line

We Leave It Up To You

A tractor line that meets absolutely every power farming demand. The tractor you need is here. Which is it?

Aultman-Taylor 15-30

A hard-working, all-year, all-job tractor that will put through any power job on the average size farm most economically. It pulls four bottoms and handles a 27-inch cylinder thresher. The 15-30 is the proper size and weight to cover the widest range of service at the lowest possible cost.

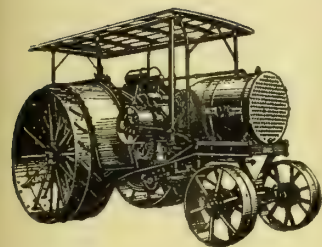
Aultman-Taylor 30-60

Frankly, not a tractor for the average size farm—but a huge, rugged machine built with the brute strength for the biggest power jobs. The 30-60 is particularly adapted to use on larger farms and for road building. A proven tractor with 10 years of faithful service behind it. It draws 8 to 12 plows and operates the largest thresher.

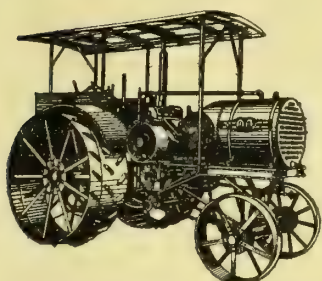
Aultman-Taylor 22-45

A heavy-duty tractor built along the same lines as the 30-60. Draws 6 to 8 plows and operates as large as a 32-inch thresher.

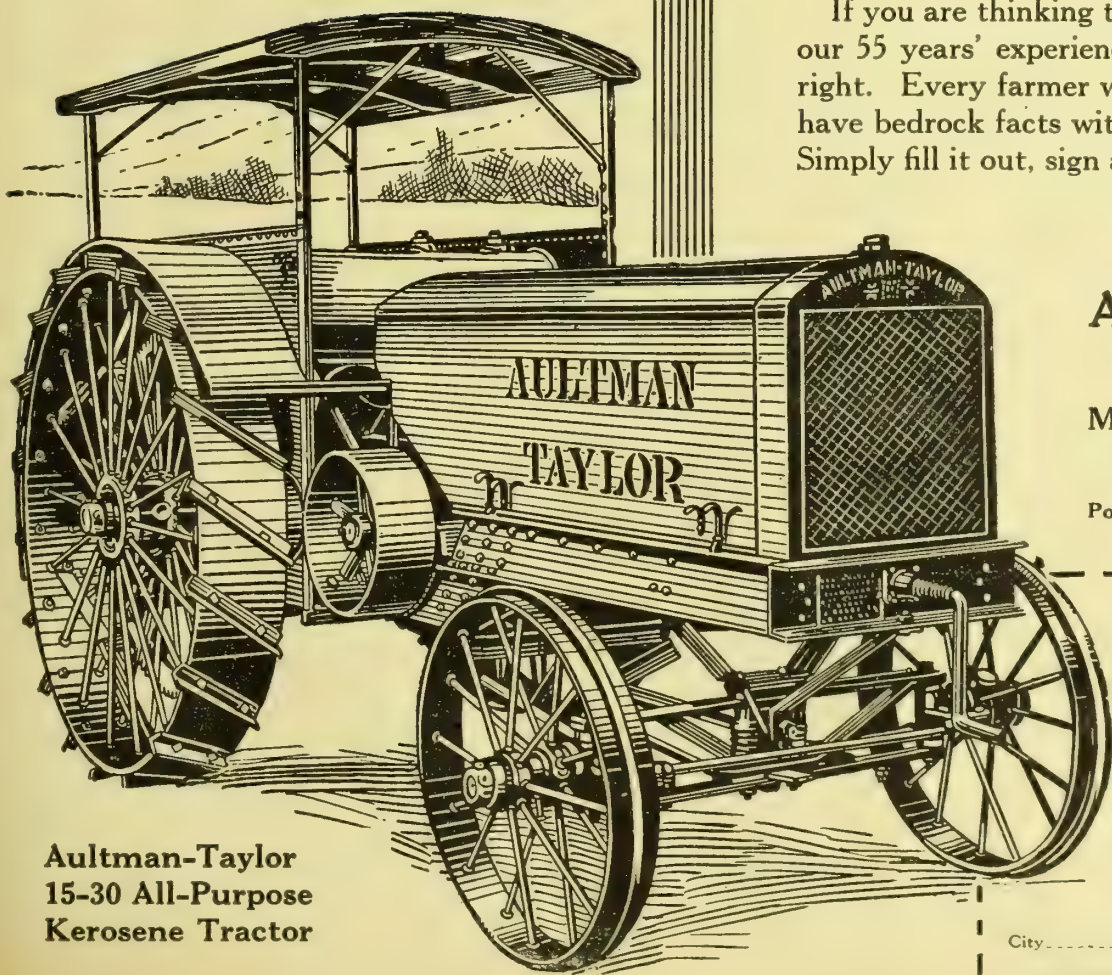
If you are thinking tractor—let us advise you. Let our 55 years' experience help you decide and decide right. Every farmer who uses the coupon below can have bedrock facts without any obligation whatever. Simply fill it out, sign and mail today.



[Aultman-Taylor 22-45



Aultman-Taylor 30-60



Aultman-Taylor
15-30 All-Purpose
Kerosene Tractor

The Aultman & Taylor Machinery Co.

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THE AULTMAN & TAYLOR MACH. CO.
Mansfield, Ohio

Gentlemen:—Please let me have full facts as to the profitable size and design of tractor adapted to conditions on my farm.

Number of acres..... Have you a thresher.....

Principal crop..... What help do you employ.....

Number of horses.....

Have you a tractor now.....

NAME.....

Street or R. F. D.....

City..... State.....

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YOU have the tractor. Now keep it always young and active. Steer clear of the junk heap.

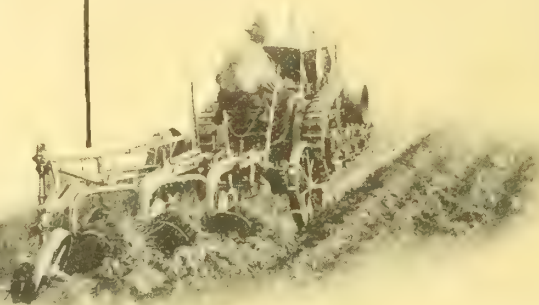
Don't be stingy with lubricants. Give it enough. And don't keep switching from one kind to another.

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Write for interesting free booklet, "Tractioneer's Guide to Good Lubrication."



Mention The American Thresherman and Farm Power

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The Compensation Act compels you to carry insurance on employees if you have in common employment three or more employees at any one time.

For failure to comply with the act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (total disability).....	\$10,000.00
Loss of eye.....	\$ 1,990.00
Loss of hand.....	\$ 2,500.00
Loss of index finger.....	\$ 650.00
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Even though the law did not require you to carry insurance, can you afford to take chances of having an employee seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us for a minimum premium of \$30.00?

Let us assume all your liability. Write us today for application blanks and full particulars.

Threshermen's National Insurance Company, Ltd., Mtl.

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

meal. The probability is that covers so treated are much cleaner than when immersed in greasy dish-water! Knives used for paring can, with almost no effort, be rinsed and wiped and put away, instead of standing to discolor and need scouring. Basins used to wash vegetables in are wiped and put away as soon as not needed—and so the game goes on. When the meal is ready, lo, there seem to have been no dishes used in its preparation and yet but a very little extra time or effort has been expended.

"From the habit formed in the kitchen-work, it is wonderful how the fun spreads to the rest of the house. Climbing stairs was one of the things to be taken into account, in those semi-invalid days of mine, and I studied to make every trip count to the uttermost. A light basket, with a good handle, proved most useful. Into it went ever little article that needed to make a journey up or down, as the case might be, and if too much for my strength, husband toted it when he came in. Now, the habit is so firmly established that I seldom if ever make a trip either up or down without a glance around to see what should be taken along. Just so, in passing from room to room. There is really little excuse for finding things that belong in the kitchen reposing on the sitting-room table, even if "men are careless." No housekeeper but makes trips from one room to another many times a day, when she is in normal health. Take along the things that should go. Then, instead of a "clearin'-up" time, you will always be "clar'd up" and have an orderly place in which to rest "between-times" as we are doing now.—But those potatoes are done and ready to mash, so please drain them and *wipe up the cover and put it away on its rack and we'll dish up.*"

The Remainder of the Story

Last month we gave directions for salting and drying vegetables. To insure perfect satisfaction following the work, the remainder of the story must be told. There are "ways" and "ways" of cooking dried and salted vegetables and the method of cooking makes almost as much difference in the success of the dish as does the method of preserving.

Vegetables that have been preserved by salting should be well rinsed in cold water, when taken from the brine, and then soaked in a generous amount of water to draw out the excess salt. The time necessary for this soaking will vary with the vegetable. When sufficiently freshened, drain, and put on to cook in cold water, bring slowly to the boiling point and cook until tender. We have found the following recipes for using salted and dried vegetables reliable and pleasing.

MOCK MINCEMEAT.

Three pounds salted green tomatoes, two pounds apples, one cup chopped suet, two cups molasses, one cup corn sirup, one pound raisins, one cup vinegar, one teaspoon cloves, two tablespoons cinnamon, one teaspoon allspice, one teaspoon nutmeg.

Soak the tomatoes for two hours and chop them fine. Chop the apples. Add the other ingredients and cook the mixture until it is thick. This mincemeat will keep for some time in a covered jar.

STUFFED GREEN TOMATOES.

Soak salted green tomatoes for two hours. Remove a thin slice from the top of each, take out the seeds and fill the cavity with a mixture of boiled hominy grits, barley, or rice, well seasoned with onion, paprika, and ground peanuts. Place the tomatoes in a baking dish, and add sufficient stock to almost cover them. Cover the dish, and bake slowly until the tomatoes are tender, about one hour.

RIPE-TOMATO SALAD.

Use tomatoes that have been preserved in salt and vinegar solution. Soak them for thirty minutes. Peel them and remove the stem ends and the seeds. Fill the cavities with minced green pepper that has been preserved in salt and vinegar solution and rinsed but not soaked, and with celery moistened with salad dressing. Place a spoonful of the dressing on top and serve the tomatoes on lettuce or finely sliced cabbage.

TOMATO CHUTNEY.

One pint salted ripe tomatoes, cut in small pieces, two medium-sized onions, minced, two salted green peppers, one cup tart apple, diced, not pared, two-thirds cup corn sirup, one-half teaspoon whole cloves, one teaspoon ground cinnamon, one and one-third cups vinegar.

Peel the tomatoes and soak them for thirty minutes. Mince the peppers; they should not be soaked. Combine all the ingredients and cook the mixture until it is thick and clear.

GREEN-TOMATO RELISH.

One-fourth cup salt pork, diced, one small onion, four green tomatoes, preserved in salt and vinegar solution, two pimentos, diced, one salted green pepper, diced, boiling water, two tablespoons cornstarch, one-half cup cold water, one tablespoon butter, paprika.

Sear the salt pork well. Add the onion, which has been sliced thin, and cook it until it is light brown. Soak the tomatoes for one hour, dice them, and add them with the pimentos and the green pepper. Add sufficient boiling water to cover the mixture, and cook it until the tomatoes are tender. Thicken the mixture with the cornstarch moistened in the cold water, and add the butter and paprika. Cook the mixture until it is clear. Serve it with fish,

hamburger steak, or cheese scrapple. Tomatoes that have been preserved in the salt and vinegar solution should be used in this recipe because of their slightly acid flavor.

MIXED PICKLE.

One pint salted string beans, two salted green peppers, three-fourths cup salted corn, one-half cup salted parsley, two medium-sized onions, two pimentos, two teaspoons celery seed, two teaspoons white mustard seed, one-fourth teaspoon paprika, two cups vinegar, two-thirds cup corn sirup, one-eighth teaspoon turmeric.

Soak the beans, peppers, corn, and parsley for about two hours. Dice the peppers and cook them with the other salted vegetables until they are tender. Add the other ingredients, and cook the mixture until it is clear.

STUFFED PEPPERS.

Eight to twelve salted green peppers, two cups cooked rice, one-third cup chopped peanuts, one teaspoon onion, one-fourth teaspoon sage.

Soak the peppers for two hours. Boil them until they are tender. Combine the remaining ingredients, and fill the pepper cavities with the mixture. Cover the tops with buttered crumbs. Bake the stuffed peppers for thirty minutes. Any kind of left-over meat may be used instead of peanuts.

All Around the Home

The easiest way to clean picture frames is to use a small paint brush.

An old stocking leg drawn over a broom will save it and prevent the splints from breaking off.

Stains may be removed from the zinc tops of kitchen tables with vinegar.

To prevent cheese from becoming mouldy or dry wrap it in a cloth dampened with vinegar, and keep in a covered dish.

To perfume underlinen, put a lump of orris-root into the boiler on washing days. The clothes will be deliciously fragrant, even after ironing.

Speaking of cakes, we had to try it before we were convinced that water, in place of milk, not only did as well but much better in cakes. The texture will be finer and far more tender if water is used.

A way of peeling tomatoes which is not generally known perhaps is to rub them with the back of the knife thoroughly, being particular to rub the entire surface, but not hard enough to break the skin. Then peel in the usual way. It is quickly done and in better shape to slice, and in this way they are much firmer than if boiling water is poured over them.



You put in fuel---you take out work; plowing, harvesting and other farm jobs.

The *Magneto* is the part of the tractor which makes that change for you. It turns the gas or kerosene into the driving force that pushes the pistons and turns the crank shaft with the strength of a score of horses. It is one thing which you should look into most carefully when buying or operating a tractor.

Here are a few of the facts you will find.

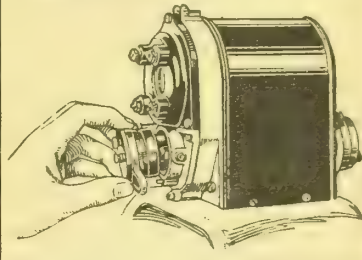
Most tractors which have been making good for years past are using K-W Magnetos. Firms that make tractors for the hardest work use K-W Magnetos on all their large models. Many farmers who have had trouble with their tractors have overcome it completely by installing a K-W Magneto.

If you want to get a K-W Magneto on your new tractor or install one to improve your present tractor, write us for information.

THE K-W IGNITION CO.
2837 Chester Ave. CLEVELAND, OHIO, U.S.A.

Easy to Care For

Here is all you need do to keep the K-W Magneto in excellent order:
Oil the bearings once a month.
Wipe out distributor with soft cloth.
Inspect the "circuit breaker," which can be completely removed and held in the hand while you work on it.



Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop.



20 POT BULBS 25c

1 Chinese Sacred Lily, 6 New Purity Freesia, 2 Double Rosebud, 3 Buttercup, 2 Bowi and 6 Grand Duchess Oxalis. These 20 bulbs and Catalog

MAILED FOR 25 CENTS

Hyacinths, Tulips, Narcissus, Peonies, Lilies, Irises, Phloxes, Hardy Plants, Shrubs, Vines, Berries, in great variety. Also splendid window plants for winter. Seeds for Fall sowing, etc.

Large beautiful Catalog free
John Lewis Childs, Inc.
Floral Park, N. Y.

How to Increase Your Crops And save them from drought every year.



THIS BOOK TELLS HOW
Sent Free

Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures Crops, especially POTATOES.

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General Office & Works: Dept. 12, Aurora, Ill.
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Another Practical Way to Use Your Tractor "In-Between"

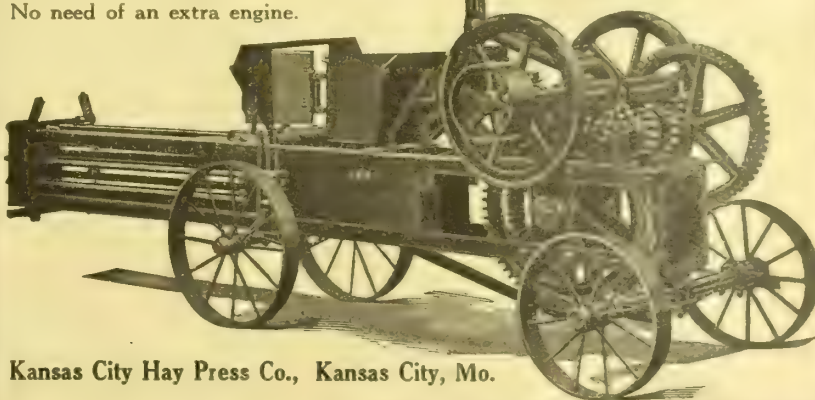
Baling Hay! A happy idea that has been tried out and found very profitable.

The K. C. is the tractor baler. Your tractor will attend to the operation of it. No need of an extra engine.

Aside from this you'll like the K. C. for its unlimited capacity, its low lift, its easy adjustment.

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Built in three sizes, 14x18, 17x18 and 17x22.



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Right in your locality--spare time or full time--you can do what others are doing everywhere. That means net earnings of five thousand dollars a year or more. It means a business of your own *with work always waiting*. It means interesting work that is easy and requires no experience.

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This ditcher cuts through frost and hardpan. It gives you 100 to 150 rods of ditch each day--every foot clean, smooth, true to grade and ready for tile. Furnishes its own power. Operates well in swampy land.

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Write us today. Tell us the soil conditions in your vicinity and average depth of ditching. We will then send you a free copy of our big book, "Dollars in Ditches." And our service engineers will tell you the exact size ditcher you need. They will show you how to get started *right*--show you how others make big money--*and how you can make it too*.

Hundreds of Letters Like This

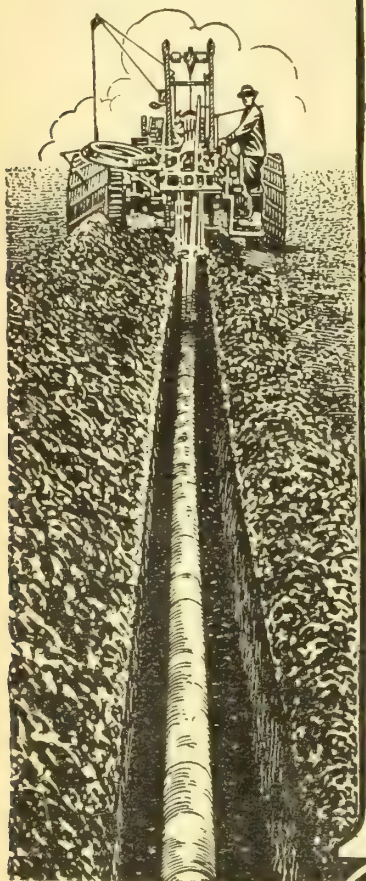
"I excavated a trench 16,000 feet long, average depth 25 inches. I received 1c per lineal foot, or \$160 for the job and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him, tightened the governor to gain speed and in 2 3/4 hours had the job done. Average of 800 feet per hour for the 2 3/4 hours at 1c per foot is \$8.00 per hour."

JOHN C. OPFER, SANDUSKY, O.

Write today for full details. No obligation.

**The Buckeye Traction
Ditcher Co.**

100 Crystal Ave., Findlay, O.



LUNKENHEIMER
AUTOMOTIVE
ACCESSORIES
THE LUNKENHEIMER CO.
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WRITE FOR CATALOGUE NO. 5-E

The CHESAPEAKE

Stitched Canvas Thresher Belting

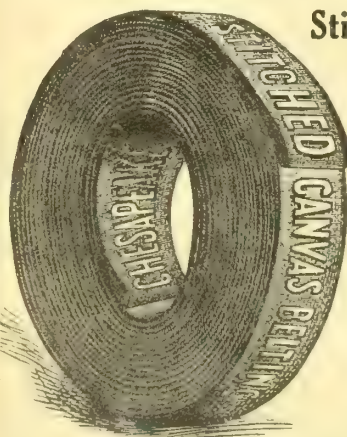
"Thirty years of service that has not been surpassed by any other canvas belt."

It is made from the highest grades of raw material which are used after a most rigid inspection. The manufacturing equipment is of the most up to date type and there are thirty years of manufacturing experience behind the goods. All these points produce a belt that will give you the maximum service under all operating conditions. The price is reasonable, even low, for the quality offered. Full stocks are carried and prompt deliveries can be made.

You are offered Quality, Experience and Service at a minimum price. Samples and further particulars will be gladly sent without obligation.

The Chesapeake Belting Company
821 McKim St. Baltimore, Md.

Also Manufacturers of
STAR BRAND BAR BELT DRESSING



Mention The American Thresherman and Farm Power

Selling the Sidelines

BY W. C. SMITH

WHEN C. P. Norton of Grant County, Indiana, found himself out of a job, at the factory where he had been employed, because of a strike, he did not worry about it much. Instead he went into business for himself and because that business hinges upon two things which are of paramount interest to farmers, I consider his story worth telling. These two things are indifferent salesmanship and lack of coöperation and Norton is capitalizing them. Incidentally his story discloses some of the gaps which may lie between the man who grows a thing and the man who sits down to say grace over it.

To illustrate--Norton, who already had a horse and wagon, started out the morning after the strike was called to solicit orders for farm produce among private families and small boarding houses. He did not even ask what farmers were getting for their produce for he had been reared in the country and had farmed for himself and knew only too well that the city selling price was a great deal higher than the farmer received. Besides, he had rolled this idea around in the back of his head for a long time and had a plan mapped out. He sold only eggs and butter that first day and took orders for strictly fresh eggs and fresh country butter at prices several cents below what the city stores were asking. He did not in his own words "set the world afire" that first day but he got some orders. The next day he went at it again and had more success so he kept it up until Thursday of that week taking orders for eggs and butter. And he did not have an egg of his own and was using oleo on his own table.

Thursday, Norton hitched up his horse and drove down to his old neighborhood. He visited around among his old neighbors and friends and bought eggs and butter. Norton knew the best butter makers of the community and he bought nothing but good butter and paid a premium for it. He also paid a few cents more per dozen for the eggs than the merchants in the little village and the hucksters were paying and folks were glad to see him. He went back with his wagon loaded as heavily as it would stand. In the meantime, he explained something of what he was trying to do and told them he would be back.

He came back. In fact, that first trip was made a considerable time ago and Norton is still coming back. The strike was settled shortly but he did not go back to work for the most excellent reason that he is making more money in his present business,

likes the job and is his own boss. Just to show the gap between the farm and the city consumer it might be said that Norton had more than forty dollars left for his work and the use of his horse and wagon that first week. He told me himself that he averaged more than ten cents margin on every dozen eggs he handled and he paid the farm wives more than they would have received in their own market and sold them to the city wives for four cents less than they would have been compelled to pay at the city stores.

It can hardly be said that a man who pays the producer more for his products than others will pay and who sells it for less than others must pay in the ordinary channels of trade is a profiteer even if he does make good money for himself. I would figure him to be a sort of a blessing to everyone concerned and he simply erased several small profits, made himself useful and kept the change. A little coöperation among the members of this community, an effort to learn something of selling conditions in the city and a slight selling ability would have kept this difference of price at home but no one made the effort to look after those seemingly unimportant items. Norton has the thing summed up about right.

"I have always wanted to try something of the sort but I couldn't quit my job. I was afraid to leave a sure thing for something doubtful. Then I always had the idea that I ought to try it out in one of the big industrial centers. I've had Detroit in mind for a long time and I wanted to go up there and build up a trade in country produce but when the factory shut down I was foot loose and short of capital so I decided to try right where I was. I'm glad I didn't go to Detroit or any other large city. There is more business here at home than I can supply--there is in almost any fair sized town."

"How did you happen to take up a plan of this sort?" I asked.

"I used to farm," he told me. "We always sold our eggs to the huckster or to the village stores and our butter went the same route. Then there was always a small surplus of this and that and it didn't pay to hunt up a market for it so we just sold it the best we could or let it go to waste or gave it away or something. Back in those days I thought of getting several of the neighbors to go together and sell their stuff on a sort of coöperative plan but nothing came of it. Then after I moved to town and had to pay about twice for my stuff what people on the farms get for it I began to think about the coöperative marketing idea. The hard part was

to get any one farmer to handle the business end so it came to me that an outsider might go out and collect these things and find a market. That is about all there is to it except I found the market first."

Norton does not confine his sales to butter and eggs. In fact, his income from other sources is greater than it is from these items but they are a regular, everyday sale. He does a business in odds and ends as he calls it and when one of his city customers hints at anything she would like to have from the farm he tries to get it. He bought a half dozen quarts of sorghum molasses and found a ready sale for it. He heard a city lady say one day that she would be tickled if she had one of those old-fashioned, long-necked squashes that they used to bake in the oven when she was a girl on the farm and the next trip Norton had a squash for her. He handles considerable numbers of fries in the spring and pays enough so it is profitable for a farm woman to raise and dress them. When Norton finds a farmer with a pig or two that has been fed out and who does not care to "peddle" he tells the man to go ahead and butcher it and he will sell it on a small commission. He makes a little money for himself and for the other fellow in this way and sometimes he buys the hog himself and pays the farmer for butchering.

In the country where Norton used to live and where he picks up practically all of his produce, no systematic effort has ever been made to market fruit. When one man had cherries every other man's orchard bore cherries and when one tree bore pears all trees in the neighborhood had pears on it. Norton buys considerable fruit by the tree and picks it himself. There is always a ready market in the city for fruit. He has handled the surplus from the grape vines and berry bushes that would have otherwise gone to waste and he says that is where he makes his best profit—from these small items that have never been regarded as profitable by the farm owners or tenants.

I did not start this story to advertise Norton but because his story illustrates the opportunity that lies in the dooryard of so many communities I am going to let it stand. The idea is to show something of what may be accomplished by an intelligent plan of marketing those things which often must be sold for much less than the city dweller has to pay for them and which often go completely to waste. Any bright boy or woman in practically any community can do what Norton is doing and the advantage is not for the individual alone—it is to the advantage of the entire neighborhood. The ideal plan would be a coöperative marketing association of farmers' wives—for farmers' wives usually have charge of these so called

sidelines. It might embrace the poultry and eggs, the extra fruit, the product of a few stands of bees but at any rate there should be sufficient coöperation to furnish a year-around supply of certain items with other seasonal products to be worked off as they came on. Norton says his best customers are the private families and the small boarding houses because they usually call for a high quality and do not object to paying what it is worth, although his prices are usually less than the best stores. More than that he says the more popular restaurants, hotels, cafes and lunch rooms in general are the natural markets for his competitors with vegetables and fruits and he does not care to compete with them. Naturally he was helped somewhat by his acquaintance in the city but anyone who will give heed to the salesman's first precept of having something worth while to sell and asking a fair price for it can do as well as this man.

Chinese Roads Are Zig-Zag

One of the questions Everard Thompson, economic expert, expects to cover in a trade analysis of the Far East which he is making for the Firestone Tire & Rubber Company is whether the Chinese can be persuaded to straighten their zig-zag roads. Mr. Thompson is builder of Sheepshead Bay Speedway and the Yale Bowl.

According to popular superstition said to have existed centuries ago in the gigantic Oriental nation, the Devil, a near-sighted Nemesis, was wont to pursue his intended victims along the main highways of the nation. The Chinese cleverly took advantage of the Satanic short-sightedness by causing their roads to break at abrupt angles.

In the desperate chase which always ensued when a Chinaman started on a journey, His Satanic Majesty would run headlong into the buttresses along the highway before he saw the sharp turn in the road. Meanwhile, the keen-almond-eyed Oriental, seeing the curves, would turn the corner and cleverly elude the Evil One before the smoke from the sulphuric language had lifted.

While this system doubtless has been most effective, approximately four hundred million Chinese appearing to testify by their presence to its efficacy, the sharp corners are said to be serious obstacles to motor traffic and the Chinese ship-by-truck program. Whether the superstition was responsible for the ancient highway engineering policy or not, the fact remains that the roads are impractical for rapid traffic and Mr. Thompson is said to be endeavoring to persuade them that the speed of the automobile will enable them to distance their ancient enemy if they only will straighten the curves in their roads.



Maximum Power for Baling Hay and Straw

FULL, STEADY POWER is required to produce perfect, well-packed bales of hay or straw.

If the press receives its belt power in a jerking, uneven manner, there is an added strain on every moving part. This results in inefficient operation and rapid depreciation. Thus the *drive pulley* on the press is a really important unit—governing the capacity of the press and also its length of service.

For these reasons, it is a distinct advantage to use ROCKWOOD, *The Drive Pulley*, on your baling press.

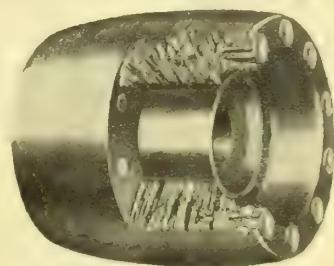
ROCKWOOD *The DRIVE PULLEY*

With Rockwood, *The Drive Pulley*, you get a steady, even flow of power from the tractor—no slipping, no jerking, no loss of power, no undue strain on the moving parts.

ROCKWOOD, *The Drive Pulley*, is now recognized as the standard farm-power drive pulley because of its efficiency, dependability and long-wearing qualities. It is now factory equipment on Ann Arbor "Langford" Balers, Fordson Tractors, Ross Silo Fillers, Layne & Bowler and National Pumps, and on many of the leading makes of grain separators. When you buy your new farm power machine, see that you get Rockwood, *The Drive Pulley*, on it.

Our interesting free booklet "Belt Power on the Farm" will be sent to you on request. Write for it today.

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt.



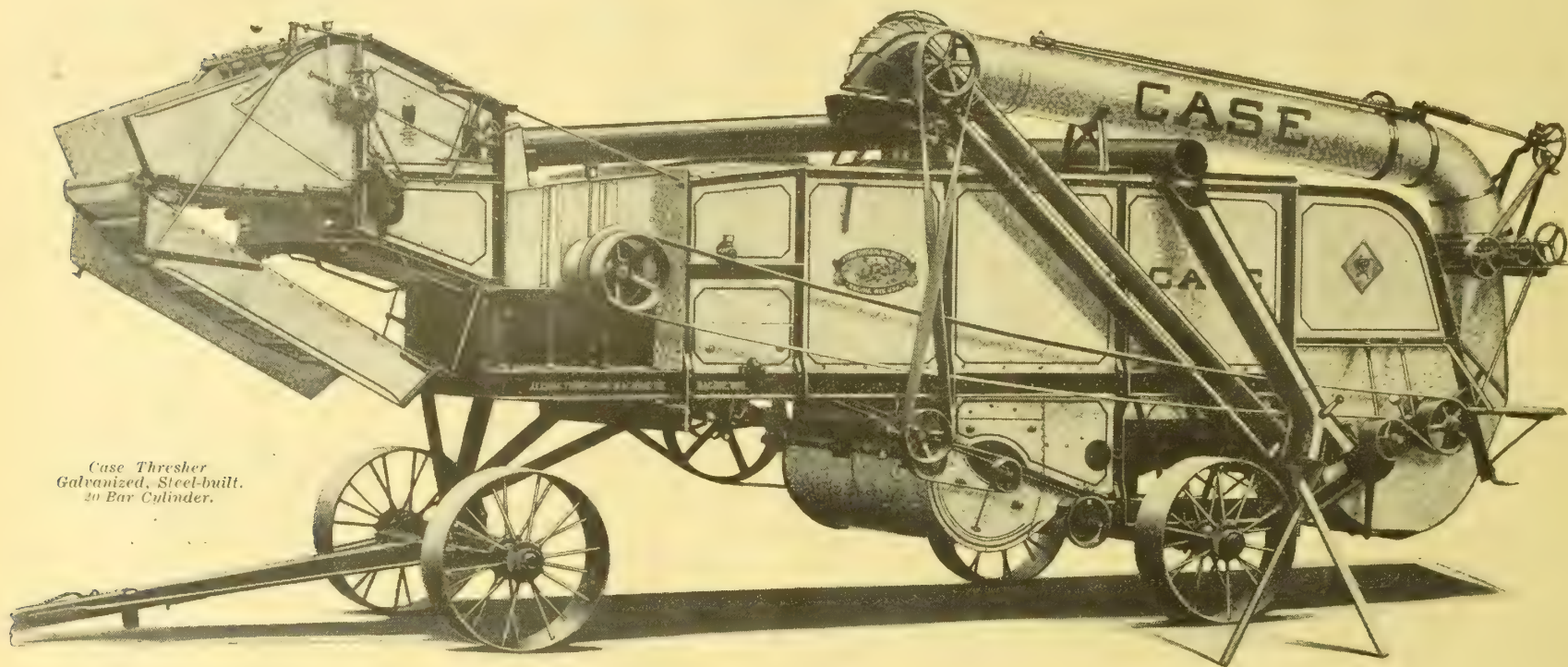
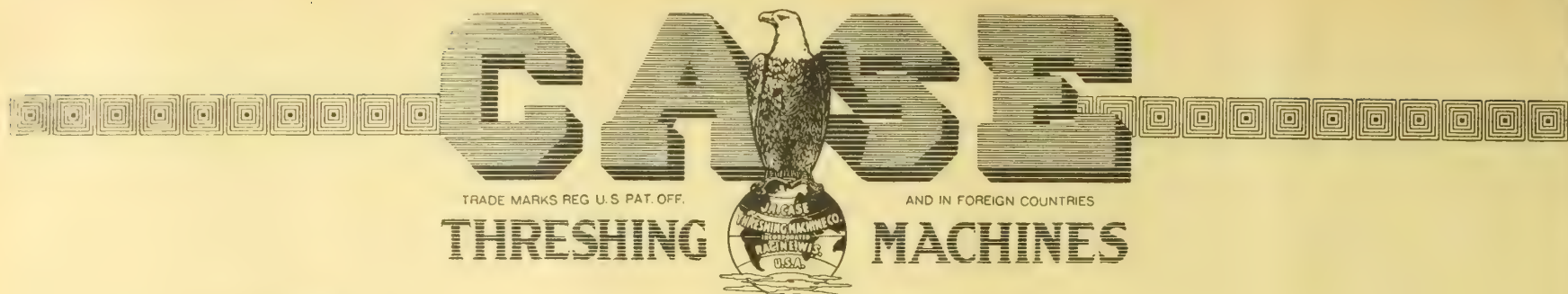
[Section removed to show construction]

surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Ave. Indianapolis, Ind.

ALL the Power — ALL the Time
ROCKWOOD, PULLEY SERVICE



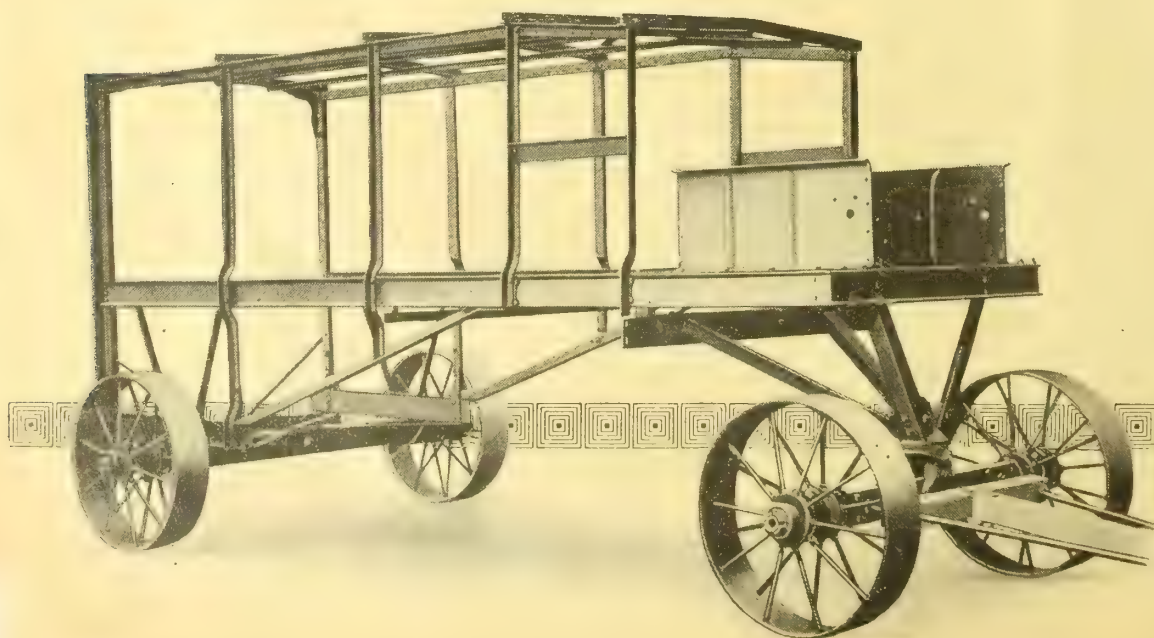
Case Thresher
Galvanized, Steel-built,
20 Bar Cylinder.



Look for the
EAGLE
Our Trade Mark

To avoid confusion the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

The Three Case Threshers *with the* Big 20-Bar Steel Cylinder



The Frame Construction of the 20-Bar Cylinder Case Galvanized, Steel-built Threshers, Main Sills are built of Heavy Steel Channels, well braced by Steel Angles. Steel Cross Girds, made of 1 Rails, are well riveted, making a frame of great rigidity, and assuring perfect alignment of shafts, bearings and pulleys, and avoiding distortion from the pull of heavy main drive belts.



ALL of the six sizes of Case Galvanized, Steel-built Threshers are built in accordance with the same correct engineering principles. They differ only in details of design and dimension necessary to give each size the highest possible efficiency in its class. Any practical threshing requirement may be met by a suitable size of Case Galvanized, Steel-built Thresher.

Thus, the three larger sizes of Case Threshers, the 32x54, the 36x58 and the 40x62 give you unusually great capacity as well as the clean threshing, thorough separation, perfect cleaning and unequalled saving common to all Case Threshers.

This great capacity is largely due to the details shown on these pages.

The big Case 20-Bar Steel Cylinder is "a hog for straw," and handles it fast enough to make threshing profitable, no matter how rank the growth. It is a wonder for thorough separation. With its 52 inch length of Concave and Grate Surface, it gets 90 per cent of the grain before it reaches the Straw Rack.

Note the Steel Frame construction and the ample space provided for keeping the straw moving back in a thin layer, as the Straw Rack performs its part of thorough separation.

Study the illustration of the Straw Rack and Grain Conveyor below it. You will see that they move in opposite directions when at work; when one moves up and back, the other moves down and forward. Opposing these parts tends to balance them and reduce vibration; their movement to and from each other also tends to cause an air pulsation which aids materially in cleaning the grain.

The 32x54 Case Thresher can be driven by a Case 22-40 Kerosene Tractor or a Case 40 H. P. Steam Tractor; the 36x58 and 40x62 sizes require 50 and 65 H. P. respectively, and are best driven by Case Steam Tractors of these ratings.

Write for catalogs showing full line of Case Galvanized, Steel-built Threshers and Case Kerosene and Steam Tractors.

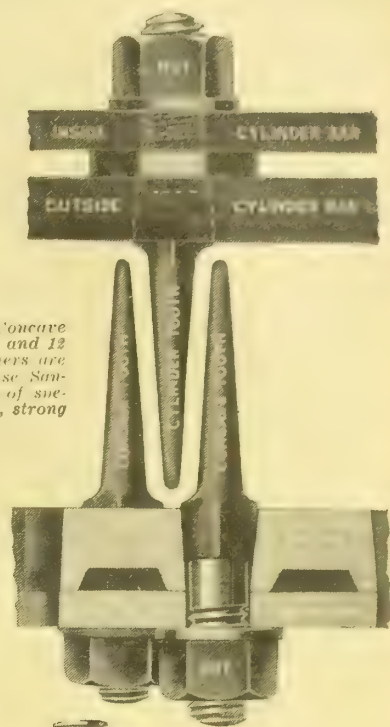
J. I. CASE THRESHING MACHINE COMPANY

(INCORPORATED)

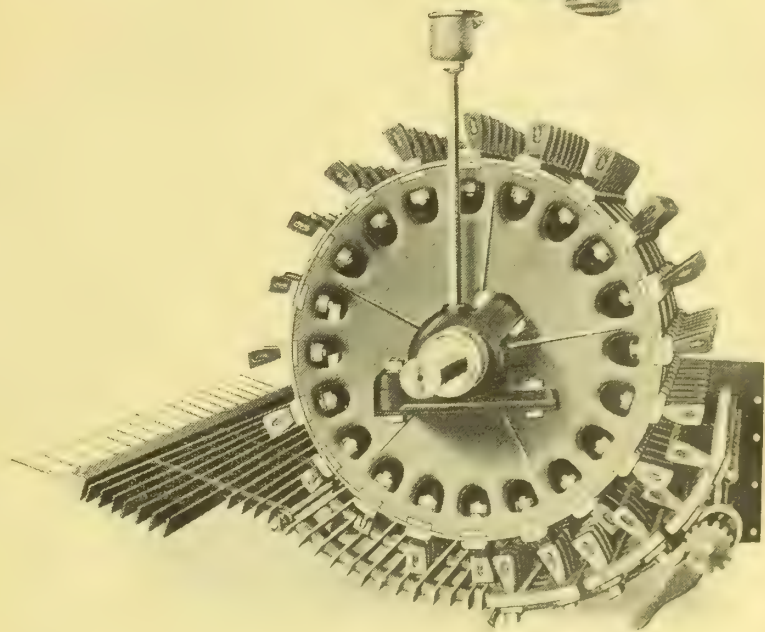
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Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842



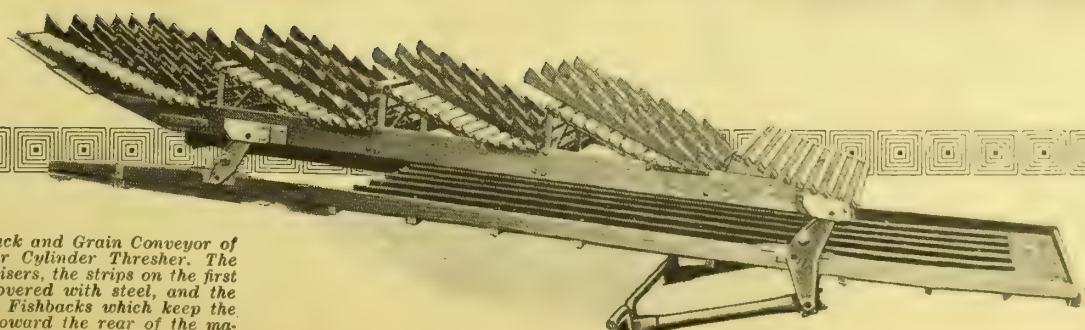
The Cylinder and Concave Teeth in all Case 20 and 12 Bar Cylinder Threshers are interchangeable. Case Sandow Cylinder Teeth of special steel, are tough, strong and durable.



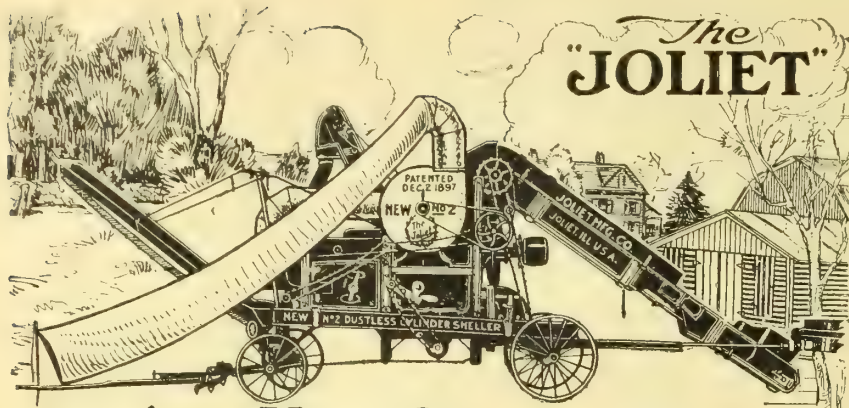
Here's the big Case 20-Bar Cylinder. It has a Concave and Grate Surface 52 inches long. Concave adjustments can be made from outside of machine while cylinder is in motion.



Self-aligning ball and socket bearings used on Case 20-Bar Galvanized, Steel-built Threshers.



The Straw Rack and Grain Conveyor of the Case 20-Bar Cylinder Thresher. The Rack has five Risers, the strips on the first section being covered with steel, and the others carrying Fishbacks which keep the straw moving toward the rear of the machine.



Are You Overlooking This Money Maker?

Over 50,000 farmers have been making good profits out of JOLIET Corn Shellers in the past 69 years. Are you one of them? Own a JOLIET and you save profits by being able to shell and deliver your corn when roads and markets are good. Then too, you can make big profits shelling for neighbors.

JOLIET, The World's Greatest Sheller

"Famous Wherever Corn Grows"

Rugged steel construction, will bear travel on roughest roads and most gruelling work. Any 8-16 Tractor runs the 6-hole spring or No. 1 cylinder Sheller. Simple and powerfully built for speedy and efficient work. Furnished with horse power if desired. Only cylinder sheller made with beaters warranted for 5 years. *Elevators pay higher prices for corn shelled by the "Joliet,"* because it is shelled right.

There's a size for your particular needs either in spring or cylinder shellers for shucked or unshucked corn.

Send us your name and receive our 1920 catalogue which tells all about the entire JOLIET line, also other interesting corn shelling information. Write today.

Some choice territory for dealers open.

Joliet Manufacturing Co.

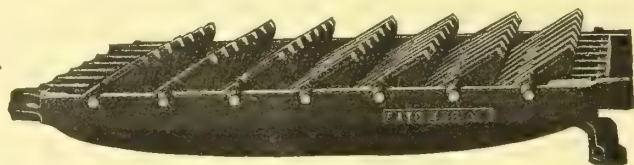
69 Youngs Avenue
JOLIET, ILLINOIS

"Jobbers Throughout the Corn Belt."



1-C

Mention The American Thresherman and Farm Power



TRAVIS ROCKER GRATES

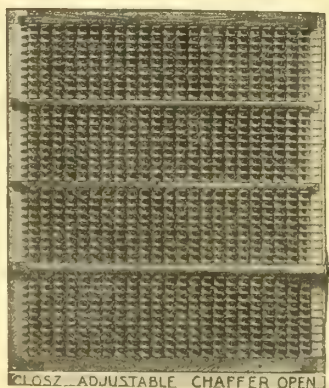
The quick detachable Rocker Grate. Easy to order and easy to install. Prompt shipment by freight or express. When ordering, give the length of your fire box from wall to wall.

Installed in thirty minutes and no further delay.

G. E. TRAVIS COMPANY, HENRY, ILLINOIS

Mention The American Thresherman and Farm Power

The Chas. Closz Patent Adjustable Sieves and Adjustable Chaffers



have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa

Parson Dickson's Sermon

IN de sixteenth chaptah an' de twenty-fo'th vuhse ob de gospel ob St. Matthew yo' will done find dese wuhds: "Den said Jesus unto His disciples, If any man will come aftah me, let him deny himself, an' take up his cross an' follow me."

In dis wuhld ob sickness an' ob sorrow, ob joys an' ob pleasuahs, dah am a cross foh ebry one, whethah he be rich or poor, great or small, an' he who am willin' to shouldah his cross at de expense ob human pleasuahs an' wuhldly things an' beah it to Calvahry, if need be, will be giben a crown up yondah.

De text am found in dat paht ob St. Matthew's gospel whah Jesus was tellin' His disciples how He would be abused an' beaten, an' betrayed by one ob de Twelbe, an' whah Petah tells Him dat it cannot be, an' Jesus done tuhns on Petah an' tells him, "Get thee behind me, Satan," an' den He uses de wuhds ob de text: "If any man come aftah me, let him deny himself, an' take up his cross an' follow me."

If yo' done wants to see an exemplification ob de command ob de Marster, 'cording to His talk to His disciples, if yo' will go out upon de streets ob any big city on most any ebenin', but most 'specially on Sunday ebenin', yo' can find godly men an' women followin' de injunction ob de Son ob Man as recohded in de text.

A little while ago I visited de wicked city of Chicago whah it am said dat dah exists a schedule ob prices foh all kinds ob crime, from sluggin' a man foh fifty dollahs, to takin' his life for from fife hundred dollahs an' up, 'cordin' to de station he holds in life. Chicago am 'bout de most wicked city in some ways in de wuhld, yet it contains many ob de most upright Christian men an' women to be found anywhah, hundreds an' thousands ob dem, many times moah dan de numbah ob criminals who gathah an' who am hahbored dah.

I walked down one ob de streets whah de sainted Moody used to preach an' pray an' whah it used to be dangahrous foh eben a man to walk along aftah night, an' dah I found de example dat Moody set befoh de wuhld bein' cahried out by a Christian denom'nation, whose soljahs ob de cross were "denyin'" demselbes an' had taken up dah crosses an' were done followin' Him,—down dah, whah de pooh an' needy gathahed 'round to heah de sweet music ob de Volunteers ob America, in contrast to de rumblin', noisy street cahs, political speakahs, an' denom'nations dat clammahed an' made much noise in dah wuhshippin' houhs.

I done watched dat crowd ob shiftin', passin' people, stoppin' to heah a wuhd or de chorus ob a song, an' I done noticed dat de greatest numbah gathahed 'round dese Christian people whose soft sweet music from cornets, violins, mandolins, an', best ob all, from de sweet singahs' gentle tones, who sang praises to God an' to His Only Begotten Son, an' which at times were drowned in de noise ob de street, always drew de best ob de crowds, an' in mah soul I realized dat dese had indeed taken up dah crosses an' were followin' in de pathway ob de Lawd.

I had 'casion to watch wid keen int'rest de effects ob de pure religion practiced ebry hough by dese good people foh I was to talk to dem aftah de open aih suhvice in de little mission close by. An' as I done watched an' listened de facts dat impressed me most was dat de Marster heahs an' de people heah, eben in de midst of de rumblin' ob cahs an' taxi cahs, ob elebated trains, trucks an' shoutin' people, an' dat humanity am hungahrin' an' thustin' to heah de wuhd ob God an' see it practiced as it am daily by dese real followahs ob de Lawd. I almost felt laik shoutin' foh joy at de proofs dat His chillern ebrywhah, ob ebry denom'nation, chu'ch an' creed, can be brought neahah to God if we only take up ouh cross an' follow de examples left by ouh Fathah in Heaben.

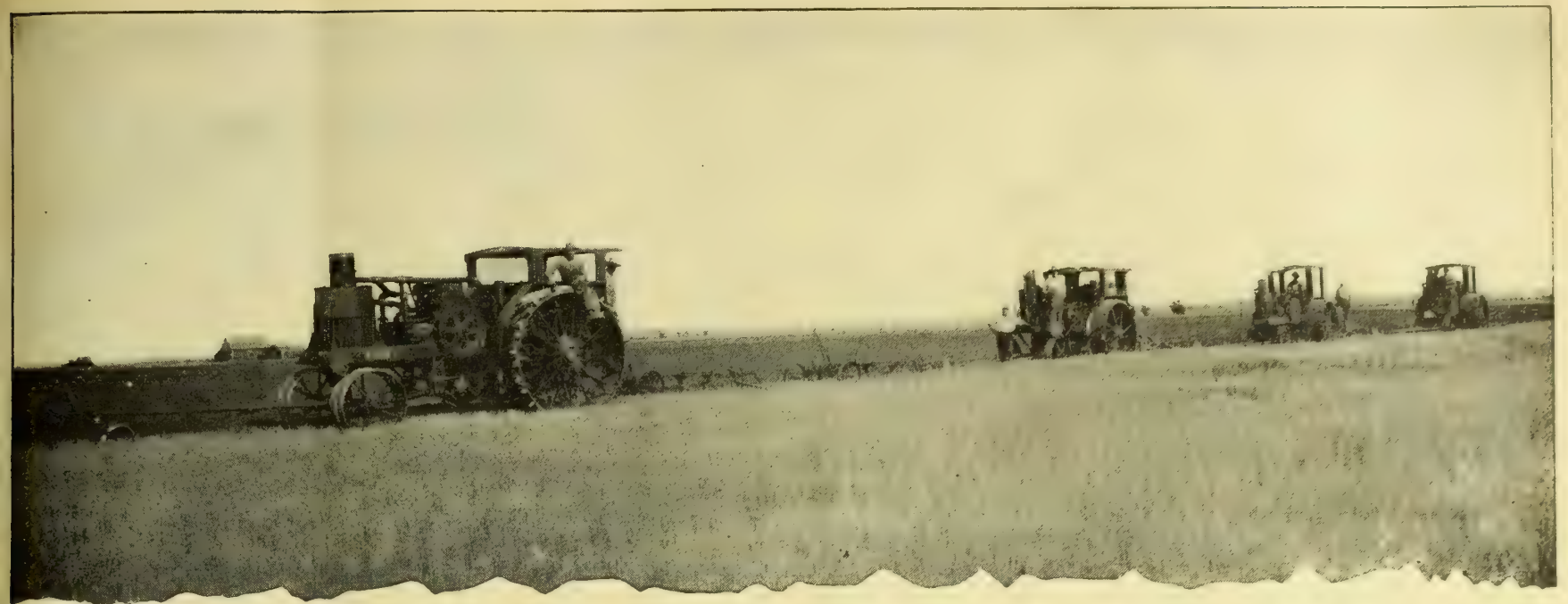
Dah neber was a time on uth when men an' women were so hungry foh de wuhd ob God an' to see it practiced by dem dat poses as teachahs ob men. Not one soul ob dat little group ob Christians who go about dat city daily, minist'rin' unto de sick an' de needy an' den preachin' an' prayin' an' singin' an' exhortin' sinnahs to draw neah an' rejoice wid dem ober de priceless inheritance dat am in stoah foh de faithful, but who could done uhn three times dah salary in wuhldly wuhk. But what does it avail if we gains de whole wuhld an' loses ouh own souls?

When I looked into de faces ob dem good Christian men an' women I felt neahah to God dan I had eber felt befoh an' I exhorted dem to keep on beahrin' de cross dat dey might foheber weah de crown.

Let de choir lead in singin',

"Mah faith looks up to Thee,
Thou Lamb of Calvahry,
Savior Divine,"—

an' trustin' in His promise dat he who beahs de cross shall weah de crown, we will be dismissed.



Four Averys in One Family

You have heard the statement, "One Avery sells another." Here is an instance worth noting.

All of the machines shown in the above photograph are owned by members of the Wiersig family, at Alva, Oklahoma. The first machine bought was an Avery 12-25 by Mr. G. Wiersig. His three sons, one after another, followed his example, the latest purchase being the Avery 45-65 H. P. shown in the foreground. Read their letters:

"The Next One Will Be Another Avery"

You are correct in saying "One Avery sells another," as our first Avery proved so satisfactory, we now have three more. I have operated my 12-25 three years, and thirty cents covers my repair bill for this period. I don't care to take chances on a different tractor. The next one will be another Avery.

G. Wiersig
Alva, Okla.

May 27, 1920.

"Not One Cent Expense in Two Years"

My Avery 12-25 Tractor sure does the work it is recommended for, and is a real tractor. I have pulled four plows on high gear and also I double disced on high gear, and have graded roads with it. For fuel I used kerosene except starting. Have only cleaned spark plugs once, and has never refused to start.

Had not one cent of expense in two years. There is no lot of trigger work to get out of order; just enough and the right stuff to give her the pep for a real one-man outfit. For simplicity, durability, and ease of operation it has no equal.

I beg to remain an Avery booster and operator. Yours for more Averys.

C. J. Wiersig,
R. F. D. A-Box 81, Alva, Okla.

"Reserve Power— which I always have"

The 45-65 Avery Tractor which I purchased last spring has given more than satisfactory results.

Before owning this 45-65 I had a 12-25 Avery which also gave the utmost of satisfaction as Avery Tractors do.

I am pulling two 5-bottom plows (on high gear of course) also a 36-60 separator with this tractor.

Of course neither of these two are a load for this engine but what you want in a tractor is reserve power, which I always have.

This tractor is operated on kerosene at all times.

If I should buy another tractor it surely would be another Avery.

May 27, 1920

G. H. Wiersig,
Alva, Okla.

"So Far Ahead That There is No Comparison"

In April 1920 I purchased an 18x36 Avery Tractor but till this time have not had the opportunity to give it a thorough try-out. But am satisfied it will give good service. I am now pulling a 4 bottom plow, burning kerosene at all times. I have had some experience with another make of tractor but the Avery is so far ahead of it that there is no comparison.

Yours,
Robt. Wiersig,
Alva, Okla.

May 28, 1920

There are good reasons why Averys give such satisfactory service and cause Avery owners to buy Averys again, and these reasons mean much to you as a tractor user.

Study the design and features of an Avery tractor. You do not find features like the Avery "Draft-Horse" motor, Renewable Cylinder Walls, Adjustable Bearing Boxes, Centrifugal Gasifiers for Burning Kerosene, "Direct-Drive" Transmission and other Avery improvements in other tractors. These are unusual features. Naturally, Avery Tractors give unusual service.

Avery-ize Your Farm—"A Good Machine and a Square Deal"

EVERY COMPANY, 334 Iowa St., Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles, and San Francisco

Distributors: Avery Company of Texas, Dallas, Amarillo and Beaumont, Texas
Also Other Principal Machinery Centers

EVERY

**Motor Farming, Threshing
and Road Building Machinery**

There's a Size Avery For Your Needs

Six sizes 8-16 to 45-65 H.P. are built with the same design. There are also two smaller tractors, the Avery 6 cylinder and 5-10 H. P. and a complete line of Avery "Self-Operated" Tractor Tillage Tools and the line of Avery Champion "Grain-Saver" Threshers.

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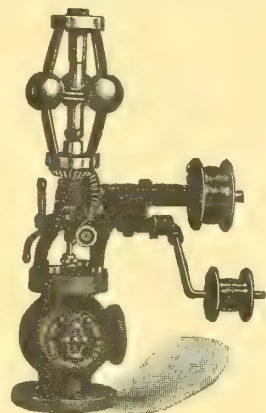
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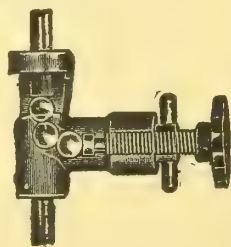
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The standard Governor for Threshermen, because giving wide range in Speed Adjustment, and close regulation.



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Farm Partnership That Paid

BY W. C. SMITH

THE most difficult thing about writing of folks who have made any considerable success in life is to find a starting place. A few may have a definite base upon which they built a future but in the majority of cases I have found whatever success has been attained has resulted from just keeping on, keeping on, and one step forward hinged on the previous step in such a manner that there is apt to be no gap—no sudden break from mediocrity to success. So I might begin the story of the Clock boys at the beginning—back when Charley worked a whole season for a farmer and received thirty-six dollars for it, or when Everett drove a team for any contractor who happened to need a teamster. No matter where one begins it is interesting.

The thing that makes it interesting is the fact that less than fifteen years ago these boys—and they are both on the right side of forty now—started farming in Delaware County, Indiana, with less than nothing and now own something like three hundred acres of that most excellent acreage. They began by renting a one hundred and seventy-three acre farm which they now own. Both brothers and their families lived in the same house and when company came they had to improvise seats from whatever came handiest because there was not enough chairs to go around.

"Everett owed about five hundred dollars," Charley told me. "I had something like two hundred and a team. We rented for cash and gave notes in settlement. We had to borrow money to pay our life insurance."

They hired no help that first year. Instead they put in from twelve to eighteen hours per day at their own work so they could keep even with it and get outside work. There were several oil leases near and they managed to keep a team hauling for a contractor most of the time. In the winter they did their feeding by lantern light at both ends of the day and often both went out with the teams either to work in the oil field or to haul logs—anything they could get to make a day's wages at. At the end of the first year they were able to meet their rental notes and had a little left with which to buy stock. It is often argued that a farmer has no business in putting a team on the road or otherwise leaving his farm to pick up stray dollars, because the farm suffers as a result and that there is enough work right at home without going out to hunt for it. That may be true in some cases—even in a majority of them; but these boys did not allow their farm work to suffer.

They kept making the farm better all of the time and still they went away from home to work.

They were and are good feeders and corn, wheat, clover and hogs have been the basis of all their operations although they have run several sheep and bought several carloads of feeders—range cattle mostly, that they finished up on rich pasture land and corn.

"We have never experimented with any of the cash crops like tomatoes or sugar beets or potatoes like some of our neighbors do," said Everett. "They seem to make money with them but we have always stuck to corn and hogs. Sometimes we miss but it averages up pretty well."

It averaged up so well that eight years after renting the original one hundred and seventy-three acres they were able to buy a nearby farm of one hundred and five acres that stands second to none as a grain farm in the county. Everett moved to that place but the boys continued their partnership and continued to rent the original farm. Charley stayed there and three years later that farm, too, passed into the ownership of the Clock boys, as everyone calls them. They had enough chairs to entertain company now and both boys owned cars.

Their banker told me that these boys had made good. Their credit is A-1 and it has always been so.

"They were always very careful," he said, "and before they asked to borrow a cent they would tell me of their plans and ask what I thought about it. Even farm practices that I but little understood they explained in the clearest possible manner and they were that way about everything. They always figured every angle."

Another man, whom if I am not mistaken is the neighborhood grouch, touched on this matter of angles.

"They're daggoned queer fellows," he growled. "Why they even call up the weather department before they cut hay to see whether it is going to rain or not. They're daggoned close, too."

I didn't see any of the earmarks of prosperity about his place—he told me he had lived there for nineteen years but didn't own the farm, so I drove on.

But he was right about the weather department matter. They do make a practice of calling the observatory at Muncie and finding out what weather conditions are liable to be for the next few days before they cut hay. I discovered, too, why he regarded them as "close."

It seems that this man operated a

clover huller and did some work for Clock Brothers. They found that he was wasting seed and remonstrated, but he vowed he was doing all his machine was capable of doing and that no one could do better. After he had finished the job they paid him and hired another machine to rethresh the stack. They got enough seed to not only pay the last man but to also pay the first bill and had money left. So their thresherman neighbor now calls them "close." In that respect they are.

"If you're square and play fair, either one of the boys will give you the shirt off of his back," another neighbor said. "But if you won't play fair with them you simply don't interest them. They won't fall out or quarrel with you—they just let you alone. There was a young fellow that started up on a nearby farm a few years ago and I positively know the boys would have backed him the limit—they did help him considerable until he sold Charley a cow. Told him the cow had a habit of tossing her head and his wife was afraid to milk her but she was harmless. He also told Charley that she had just been fresh a short time. Charley needed a cow and he bought her. In a few days he discovered that she had something the matter with her besides running a bluff with her head. Her milk was so strong that it couldn't be used and the calf didn't belong to her. The fellow had just picked it up and put with the cow to make her sell. Charley never mentioned that—the next time he shipped a load of stock though that cow went along.

"He lost several dollars on that cow but the other fellow lost the most in the end. He come and offered to square things when he saw he was in bad but Charley told him that if he would do him that way he would probably do others as bad or worse, and he couldn't see his way clear to help him any more. He left the neighborhood at the end of the season because he knocked his support out from under himself."

On the other hand a man who had absolutely no capital—a laborer, happened to mention before the boys one day that he had to raise some money right away and he didn't know where he was going to get it. One of them called him to one side.

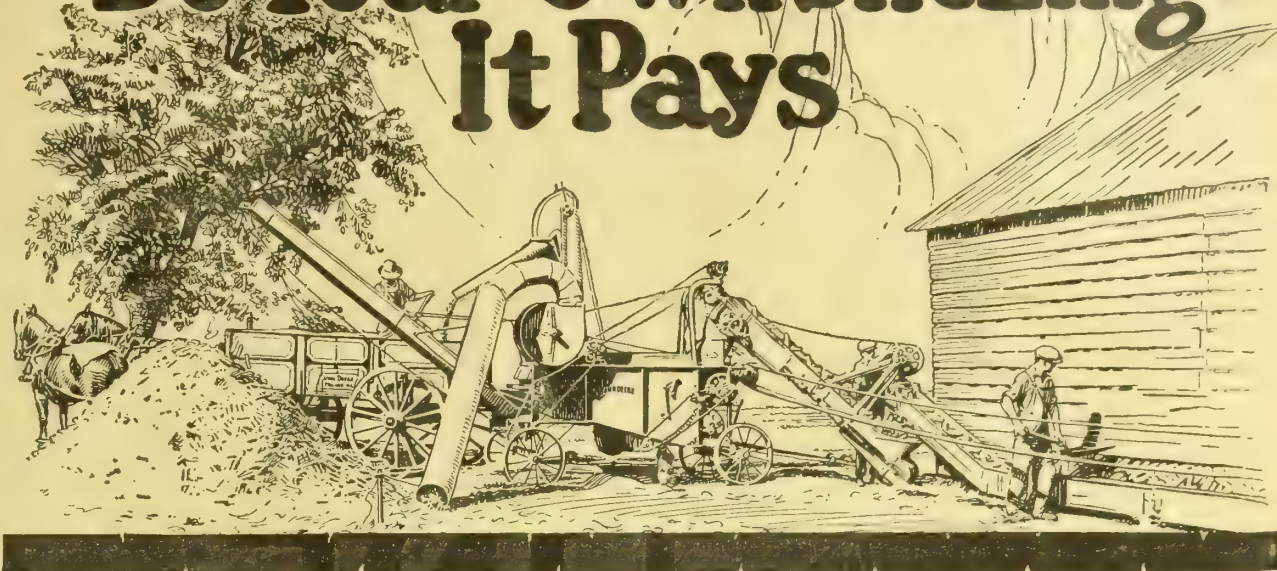
"How much are you going to have to have?" he asked.

"Fifty dollars," said the man, "and I ought to have sixty but I can get along by squeezing pretty hard with the fifty."

He was handed a check bearing Clock Brothers signature for seventy-five dollars.

"I had no intention of asking for this money," this man told me. "In fact, those boys were the last persons on earth I would have thought of going to for a loan and I was aston-

Own A Power Corn Sheller- Do Your Own Shelling- It Pays



Thousands of corn growers have found the John Deere Light Power Corn Shellers a mighty profitable investment. It enables them to shell their corn when the market is right. It utilizes idle farm power during the quiet farm season. Very little, if any, outside help is required—a crew of only three or four men is necessary. They can haul to market when the roads are good. Work is saved for the women folks—no big crew of men to cook for.

If you grow corn extensively, you can profitably own a John Deere Corn Sheller for either individual or neighborhood use.

JOHN DEERE POWER CORN SHELLERS

The Steel Shellers that Neither Warp nor Decay

JOHN DEERE No. 3 STEEL CORN SHELLER

Especially Desirable for Individual Use

This steel 2-hole sheller can be operated with an 8 H. P. farm engine or larger. With a 3-man crew, 900 to 1,500 bushels of clean, marketable corn can be shelled in a day.

Its beater force feed, together with the special arrangement of feeder wheels and simple shelling device, makes possible this big capacity at low operating speed with minimum power.

The steel construction of the frame and sides, together with self-aligning main bearings, insures a long lived, durable machine.

JOHN DEERE No. 9 CYLINDER SHELLER

A Desirable Size for Individual or Neighborhood Use

This sheller can be operated by a 16 H. P. farm engine or tractor. In a day it will turn out from 2,000 to 3,500 bushels of clean marketable corn.

Equipped with universal swivel feeder—an exclusive feature—this sheller can be operated in extremely cramped quarters.

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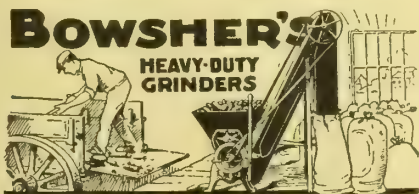
Dust separator takes out all the dust, chaff and husks from the cobs—this sheller is exceptionally clean to work around.

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Write today for sheller literature and place your order with your John Deere dealer to insure delivery in time for your use. Write to John Deere, Moline, Ill., and ask for sheller literature PS-42

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THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS.



Foremost Among Better Grinders

Crush and grind all the grains that grow. Fine for hogs or moderately coarse for cattle feeding.

Strength, durability and service radiate from every line of these masterful mills. Simple but effective in adjustment. A strictly high grade piece of machinery for the farmer or miller.

Well suited for use with all reliable tractors. Will stand more than rated power without fear of strain, vibration or injury to the mill of any sort.

Light Running—Long Life—Extra Capacity Cone-Shaped Grinders

It pays well to investigate.
10 sizes—2 to 25 H. P. or more.
Write today for FREE catalog.

The A. N. P. Bowsher Co.
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"You'll Always Find" says the Good Judge



That you get more genuine satisfaction at less cost when you use this class of tobacco.

A small chew lasts so much longer than a big chew of the ordinary kind. And the full, rich real tobacco taste gives a long lasting chewing satisfaction.

Any man who uses the Real Tobacco Chew will tell you that.

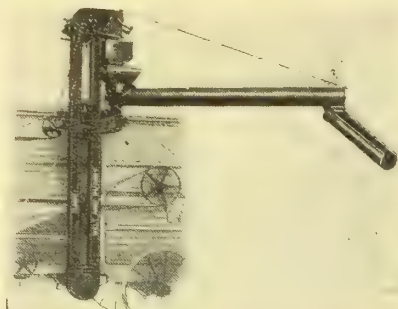
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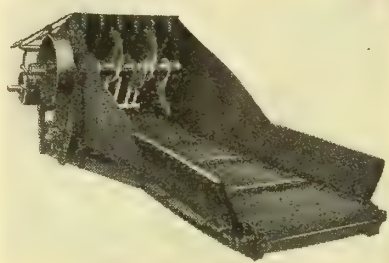
THE LEADING THRESHER MANUFACTURERS OF THE UNITED STATES AND CANADA USE -



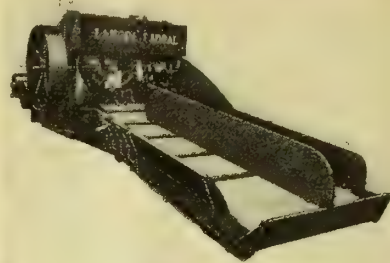
HART BELT AND BUCKET WEIGHER
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One of 12 styles suitable
for large separators.

A light weight, yet strong,
compact steel feeder for
small separators.



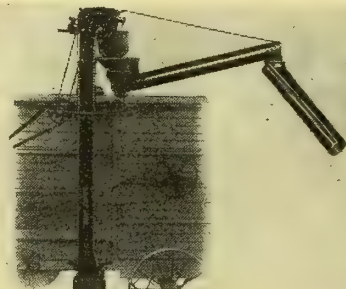
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LANGDON IDEAL SELF FEEDER

THE BETTER FEEDER
Dependable because perfectly governed. For large size separators.

THE HART JR. LINE
comprises 5 different models, all especially designed for Junior Separators and adapted to territorial conditions and requirements.



HART JR. WEIGHER
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THE HART LINE

AS STANDARD EQUIPMENT
BE SURE YOUR SEPARATOR IS HART EQUIPPED
OVER 30 DIFFERENT STYLES OF WEIGHERS AND SELF-
FEEDERS FOR LARGE AND SMALL SEPARATORS
1920 CATALOGS READY

HART GRAIN WEIGHER CO.
PEORIA - - - U-S-A - - - ILLINOIS
GRAIN HANDLING MACHINERY SINCE 1889

Mention The American Thresherman and Farm Power

ished when I got the check. I said, 'I'll make you a note for this and get someone to sign it with me so you'll be safe.' They told me to never mind the note. 'If you're honest we feel safe enough and we think you are honest. If you aren't, there isn't any use of getting anyone else in bad.' And they laughed about it. 'Don't mention it to people,' they said. 'We don't lend money as a business but we always like to help a fellow if we can.'"

They do, too. And if you borrow ten dollars of Everett you will get a Clock Brother's check. If Charley loans you ten dollars you get a Clock Brother's check—no matter what you sell them it is company business. They have a real partnership. Everett says that Charley has the business head and Charley says that Everett keeps things level. He says he is never satisfied and Everett steadies the boat when he tries to rock it. There is some truth in both of their views. I was at the local farmer's institute and the speaker touched on the farm partnership as a practical plan and both boys went up and shook hands with him afterward.

"It's the best plan there is if you get along together," they both say. "If you don't, it won't last. You see partners are both interested in what they are doing. Two heads are better than one anyway and it makes

the occasional holiday easier. Then you can plan your work to an advantage. Together we have accomplished more already than either one of us could have done singly in twice the time."

They ought to know. They started without anything but a plan and lots of assurance. They tried to "make things average up all right in the end" instead of trying to forge ahead by any sort of spasmodic spurts. They own two farms and could probably buy another one in the morning if they cared to go over the same road again but they say they do not—and they are under forty. In fact, the most remarkable thing about their work is the utter absence of the spectacular. Ask their neighbors how they did it and you get as many answers as you meet men.

Knowing that there are a lot of disappointments in every farmer's career, I asked Charley what his biggest one was.

"Working a year for thirty-six dollars," he said without hesitation. "You see it was my first job away from home. There was a big family of us and the ones that hired out sent home half of his wages to help out father. He didn't demand it—we just got the habit and I know now how welcome that little help was to him although I didn't realize it then.

It meant a lot to me, too. I was to get twelve dollars a month from March the first until fall, when the farmer was to board me and send me to the country school in exchange for my labor doing chores that winter. He paid me for the first three months and I sent father half of what I received. Then he quit paying me because there was little to do as we had no harvest to speak of. I stayed on though because I had to stay some place and work was scarce and I wanted to go to school that fall. But he changed his mind about the school and I didn't get to go after all. Instead I went home and in about a month took down with typhoid fever and didn't get out of the house until the first of May.

"That hasn't got anything to do with farming, however. But it was about the biggest disappointment I ever suffered. I got over it though and the next year I had sixty dollars laid away from my work."

I said in the beginning that I didn't know where to start this story. Perhaps I should have begun here because as I see it the ability to get over things is responsible, more than any other factor, in bringing a couple of farm boy's from twelve dollars a month jobs to modest owners of three hundred acres of number one corn-belt land in the comparatively few years since the Clock Brothers sent

home half of their wages to help keep the little Clocks in their father's house.

When little Anna Louise's little brother arrived she was told that the doctor had brought him, and the appearance of other babies in the neighborhood was explained the same way. Finally the stork left a daughter at the doctor's home, and Anna Louise's parents, who were fond of the doctor, spoke enthusiastically of the sweetness and cuteness of the newcomer.

"Yes, I guess it must be nicer than most babies," said Anna Louise "because Dr. Ott kept this one himself."—Judge.

To a Five Dollar Bill

Crinkle, crinkle, little bill;
Goodness, gracious, you look ill!
Are you losing all your power?
You seem weaker hour by hour.

"Now that prices are so high,
I'm so tired that I could die.
I just circulate all day,
No one dares put me away.
When the evening board is set
With the fruits of father's sweat,
My small voice is hushed and still—
I am in the butcher's till.
And no matter where I go,
People disregard me so;
I don't seem to count for much
'Mongst the profiteers and such."

Bill, take heart, your luck may change.
I'll admit the times are strange.
Though you're weak, I love you still—
Crinkle, crinkle, little bill.

—Exchange

Good Old Steam Engine and Custom Thresherman Still Among Us



Port Huron 19-65 and
36x60 Rusher Thresher
—Outfit of A. W. Bohling,
Auburn, Nebraska

WITH due respect for the individual threshing machine, and the gas farm tractor which has brought about its existence, the good old reliable, dependable steam engine and familiar custom thresherman are still among us, and it seems a safe bet that they will be for a long time to come, if not always.

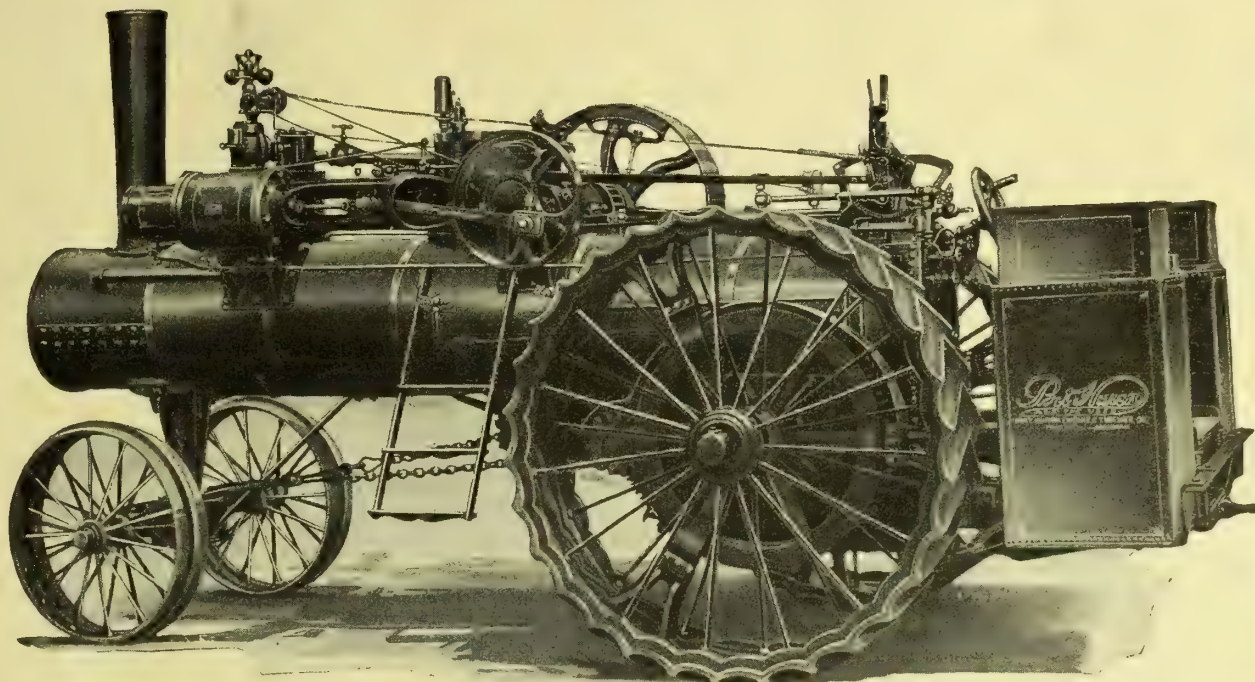
Especially does this apply to the better custom threshermen and the better grain threshers and steam engines.

An Irishman once said, "There is good whiskey and better whiskey but no bad whiskey." So, too, there are good threshers and steam engines and better threshers and steam engines but no bad ones.

Port Huron Steam Engines and Grain Threshers are the better ones, because:

PORT HURONS

Save the Farmers' High Priced Grain and Fuel

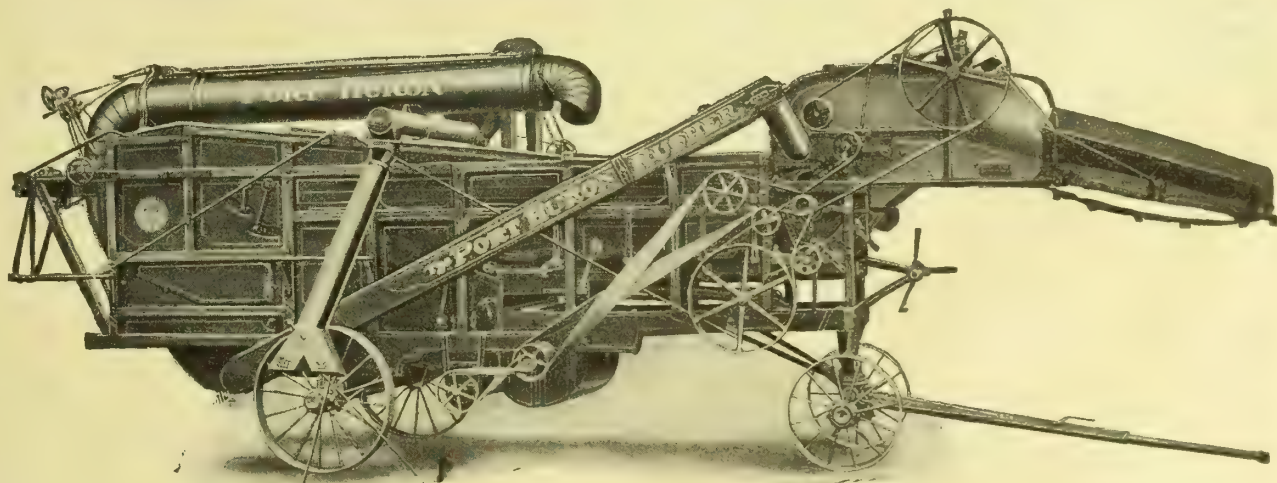


PORT HURON LONGFELLOW HIGH-PRESSURE COMPOUND—2 SIZES: 19 and 24 H. P.

PORT Huron Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market to-day. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them.

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor-Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.

The famous Mule-Kick Separation beats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing.



PORT HURON RUSHER WITH MULE-KICK SEPARATION AND RAZOR-BACK TEETH
5 SIZES—A SIZE FOR EVERY REQUIREMENT

Port Huron Engine & Thresher Company, Inc.

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Port Huron Mach'y Co., Ltd.
Des Moines, Iowa

Port Huron Engine & Thresher Co.
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Port Huron Engine & Thresher Co., Logansport, Ind.

Port Huron Mach'y Co., Ltd.
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Ask Your Dealer



Confidence!

Never has confidence been better placed than your confidence in **Red Seal Dry Batteries**. Year after year they make good—for you—for your neighbors—for farmers the nation over. Always dependable. And:—**Guaranteed**.

Red Seal Dry Batteries

are best wherever an unfailing spark, ring, etc., is needed. Buy them by name—and look for the "Red Seal." Your protection and your guarantee.

Ask Your Dealer

Under our plan, every dealer's supply is always fresh. No chance for you to get run down stock. Ask for Red Seal Dry Batteries—the batteries that thousands of farmers demand. You need them.

Note—Your dealer has a book, "How to Run the Gas Engine—Simplified," free to users of Red Seal Batteries. Ask for it when next you buy batteries.

Manhattan Electrical Supply Co., Inc.
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Guaranteed for all Open Circuit Work

RED DRY BATTERY SEAL

For Ignition
AND ALL OTHER WORK REQUIRING
High Amperage

Mention The American Thresherman and Farm Power



Your Tractor, Plus An ^{Portable} American Saw Mill Will Bring up Your Farm Profits

You can use this combination for sawing lumber—for yourself and for your neighbor—when your tractor is not otherwise employed. And there's good money in this farm lumber business—because lumber was never so high priced, and your outfit will enable you and your neighbors to turn your standing timber into good lumber at low cost. You need no skill or experience to run an "American" Mill—and with your tractor you can take it anywhere. Write for the catalog—today.

AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, N. J. NEW YORK, N. Y.
71 Main Street 1371 Hudson Terminal

Mention The American Thresherman and Farm Power

Listen To Me

IT is rather hard to understand why a whisky-making layout is called a "still." It generally produces a lot of noise.

COME up smiling. You can shoot off your gab until your jaws get tired but after you are dead and gone your oratory will be forgotten, while if you are pleasant you will be remembered for your smile.

IF you want people to believe in you and your capabilities, you must believe in yourself. Confidence inspires confidence and if you do things in a half-hearted way you will be accepted in a like manner.

YOU can always tell when they are "hooked." Just as soon as your young man friend suggests helping you get the Sunday evening lunch ready and wants to "dry" the dishes for you, give a good quick jerk, for it is a sure sign he has swallowed line, hook and sinker.

IT looks like the League of Nations was going the same route the fourteen points went. That old gag about fooling all the people all the time is still working. It takes more than jawbone to get by the crowd now. You'll have to deliver, brother, or ring the "no sale" key.

IT is not a question of the things you have accomplished in other days it is what are you doing now. If you are not a producer of some sort you are a barnacle and the thing for you to do is to get up and dust or get out of the way, and let somebody go who can.

THE storms of winter make us all appreciate the trees, flowers and birds of spring. So it is with the trials and tribulations of life. They seem pretty fierce at the time but they make us appreciate things when they are running smooth.

PRESIDENT WILSON refuses to say whether he is going to make a third term race or not. George Washington didn't, but then George was only the Father of his country. Seeing that son-in-law McAdoo can't "make the grade," things are looking badly for the Wilson dynasty. Possibly the head of the house hasn't put her okey to it.

TROUBLE is no respecter of persons. It hits the old and young alike, the good, bad and indifferent. It is human nature to imagine our own troubles are the greatest in the world, but if we will look around it won't be very hard to find some poor fellow who has trouble enough to skin us a mile. Things are only as bad as we make them seem to ourselves, so let's just grin and bear it and cut out the "mooching."

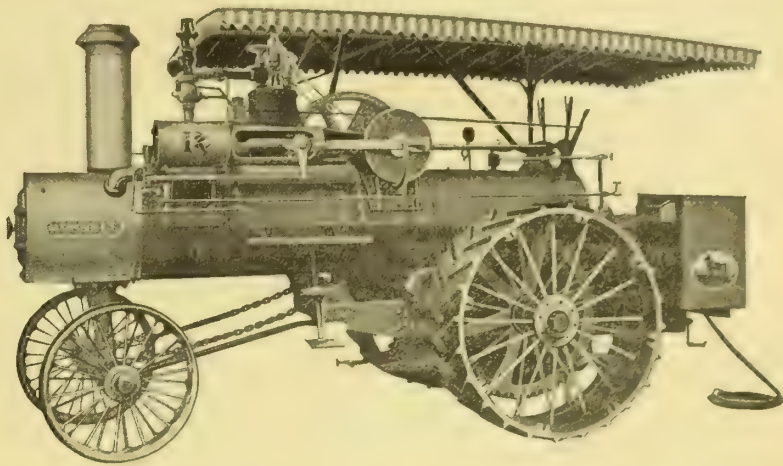
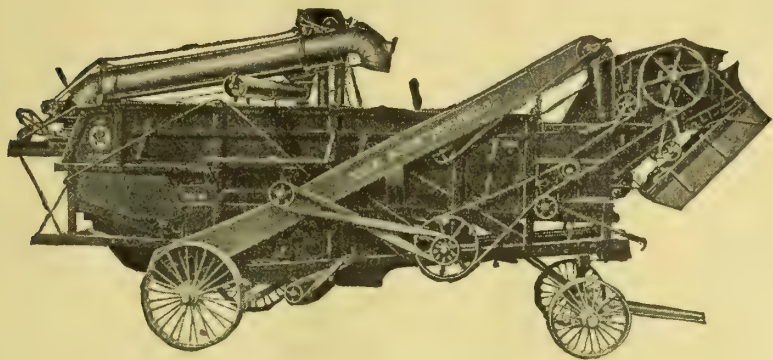
A FUNNY man in a show one night claimed he could trace baseball back to bible times, and gave the following as proof of it: Eve stole first and Adam stole second. St. Peter umpired the play, Rebecca went to the well with the pitcher, while Ruth in the field walked hay. A strike was made on Goliath by David, a base hit made on Abel by Cain, the prodigal son made a home run, and Brother Noah gave out checks for rain.

THERE is a vast difference in what a wife of yesterday expected and what the wife of today expects. Your mother considered it part of the game to help make the home. Now the young wife can't see it unless she has "period" furniture to start out with. Sister, all the high priced furniture in the world won't make home. You will find out that if you have a hand in the making it will mean more than a place to eat and sleep.

THE Lord hid the precious metals and jewels deep in the earth so that a man would have to labor to secure them and made it such a game of chance for the finders that the big majority couldn't connect, but he also left open the road to success for the man who was willing to stick to it. Don't jump over the dollar to chase a dime. A little experience in a lot of things won't get you far, but a lot of experience in a few things will take you a long ways.

ONE cause of the scarcity of labor is there are too many men in the world who should have Doolittle for a family name. You can go into any city you choose and find an army of "bench warmers" yelping about how capitalism is making slaves of labor, but they are not willing to give it a trial except by proxy. Imagination on their part makes them downtrodden and a right good cure would be to give them an imaginary "hand out" when they come "mooching" at our back doors.

RUSSELL



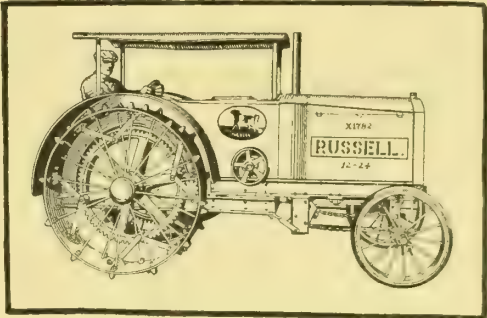
The “Old Reliable” Team

Smooth, even flow of power that keeps your Thresher running steadily at just the right speed for most grain and least wear and tear—that’s the Russell Steam Tractor, for over 45 years the world’s best threshing power.

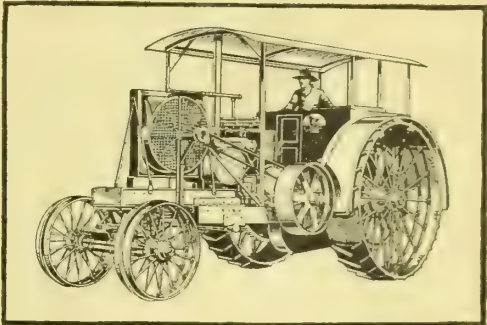
Big, easy running, 15 bar cylinder, high finger grate and patented distributing beater—these are a few of the many exclusive features that make Russell Threshers unequalled for light draft and getting out All the Grain.

Russell Steam Tractors are built in 5 sizes; Russell Kerosene Tractors in 4 sizes, and Russell Threshers in 6 sizes.

Send for the big Russell Catalog



12-24, 15-30, 20-35
All Russell Kerosene Tractors are built with 4 cylinders and 4 wheels—the most practical design for all-around power work.



30-60 H. P. Giant

The Russell & Company

Massillon, Ohio

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Mention The American Thresherman and Farm Power

One Man Saws 40 Cords a Day

At a Cost of 1 1/2¢ a Cord!

Send today for Big Special Offer and Low Direct Price on the OTTAWA, the One-Man Saw, the first made and sold direct from factory to user. Greatest labor-saver and money-maker ever invented. Saws any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H.P. Magneto equipped; no batteries needed. **Special Clutch** lever controlled enables you to start and stop saw with engine running. Automatic Speed Governor. Easy to move, costs less to operate. When not sawing, engine runs pumps, feeds mills and other machinery. Pulley furnished.

OTTAWA LOG SAW
Cuts Down Trees—Saws Logs By Power
Patent Applied For

Shipped direct from factory. No waiting—no delay. Let the OTTAWA saw your logs and pay for itself as you use it. **10-YEAR GUARANTEE.** See the OTTAWA at work on your farm once and you will never give it up. Thousands in use, every owner a booster. Out-saws any other on the market. Send today for FREE BOOK and Special Offer.

OTTAWA MFG. CO., 2215 Wood St., Ottawa, Kans.

Strictly a One-Man Outfit

Free Book and 1-1/2¢ Price.

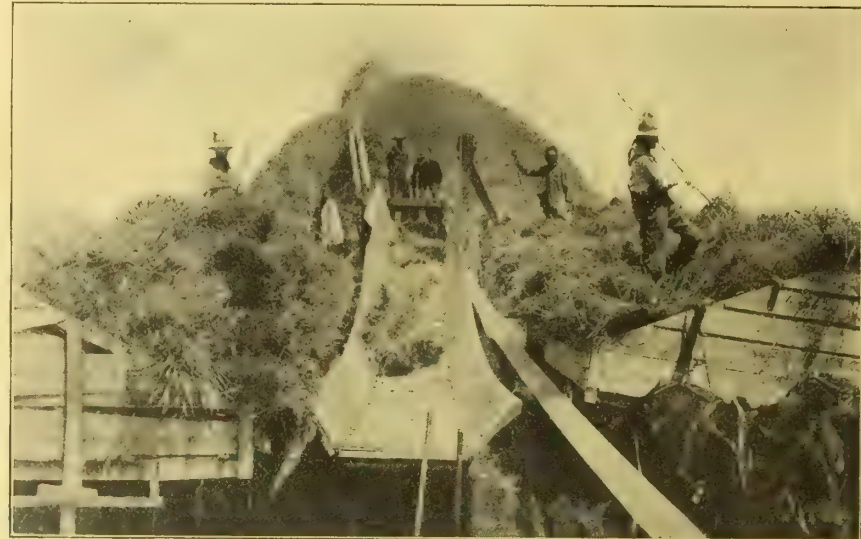
Mention The American Thresherman and Farm Power

Correspondence

While I'm not yet forty years old, I've had time to run a threshing outfit for fourteen falls, make a steam engine, an automobile and a separator. I didn't have much spare time, either, for my mother died when I was nine years old, leaving father with myself and two younger brothers, one just a baby. I had to do most of the cooking, while father raised wheat and corn from the three

sands of miles during the five years I used it. It was the first automobile most people in our section had seen.

I have always invented things "on the side," making experiments of different kinds. In 1916 I decided to find out what kind of belt is best for threshing. I wrote to manufacturers and got the best; thirty pounds friction and thirty-two ounce duck.



Richardson's Long Feeder Makes It Easy on the Pitchers. Note the Wide Trough with High Sides.

hundred and twenty acres we owned near Glen Elder, Kansas.

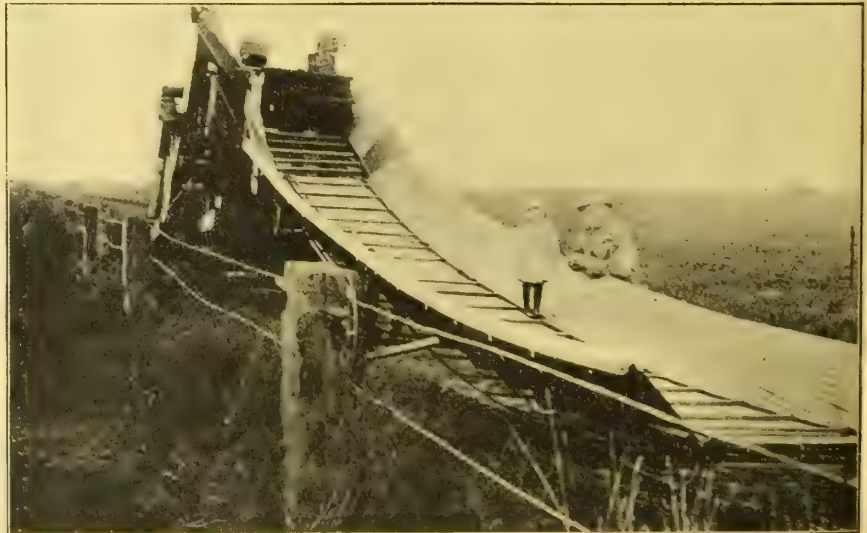
I had to learn my A B C's from my mother, as we had no school near us in those days. But she started me so well that, by plugging along and going to school whenever I could get a month away from work, I finally got through country school, high school and the Kansas Agricultural College. Although I was getting along toward thirty years old before I got through school, I'm glad I stuck to it and would urge any farm boy to do the same, even if he does seem older than most school boys.

I saw my first automobile in 1900, then I went home and made one—a single cylinder, 4x4 inches. The car only weighed eight hundred pounds, but it had three speeds forward and three reverse, and I drove it thou-

The friction in a belt is the pull it takes to separate the plies on a piece of rubber, one inch wide. Cheap belts sometimes have as low as four pounds friction, while fifteen pounds is considered very good.

Since learning all these facts about belting, I have carried a regular line of belting in stock to sell to customers; for since 1915 I have been lengthening my feeders, and now I'm making thirty-foot feeders to sell to the threshermen. These long feeders can save lots of discomfort for the threshermen, whether on stack or field threshing, and they save the wages of two men. I make the sides twenty inches high, to keep the grain from going over the other side.

It is quite an art to make these feeders so that they are not injured by jars, when the feeder is being



E. D. Richardson, Cawker City, Kansas, Has a Little Daughter Who Likes the Game, Too.

You Don't Have To Pack So Often

when you use

"PALMETTO" Packing as it is made to give long service under hard conditions.

Lubricant in each single strand keeps it soft and pliable.

Greene, Tweed and Co.

Sole Manufacturers
109 Duane St. New York

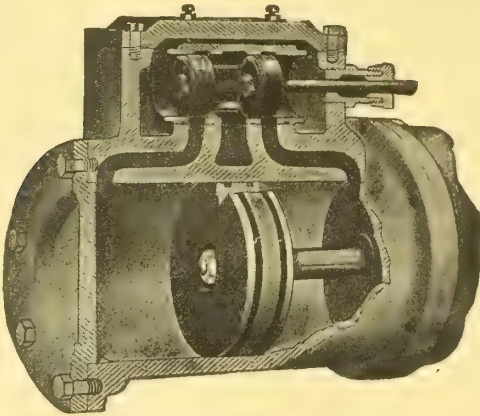


Let us send you a working sample without charge. It will convince you of its long service quality.

Mention The American Thresherman and Farm Power

Half Price

50%
Discount



50%
Discount

Take Advantage of the 50% October Discount

It isn't very often that you have an opportunity to buy a worth while article at half price, but here is your chance.

You need a Baker Valve in your engine as badly as your engine needs oil—without either one the engine cannot operate at top-notch efficiency.

Your mechanical instinct tells you that a Baker Valve will do all it is GUARANTEED to do and then some. Your 10 to 30% decrease in fuel and water expenses will pay for the valve before you realize it.

Order now and get the lowest possible price of the year. Make your first payment of \$10.00 and keep the balance until you get the valve. Have it shipped any time you want it between October 1, 1920, and July 1, 1921.

You will not be able to get this low price next month.

Order that valve now—while you think of it—TODAY!

Make your engine the best of engines by using the best of rings, the Vapor Tight.

Baker Valve Company

Box 1772, AT

Minneapolis, Minn.



hauled from one job to another. We use Deering corn binder grain wheels for carriage wheels, as they have a tire that will not hurt the drive belt. If you have any of these old wheels on hand, I'd be glad to buy them

While I've been pretty busy working for an education, threshing and making threshermen's supplies, I've had time to raise a fine family. I'm sending a picture of my little girl, in one of our long feeders, and another of us boys at work.

E. D. RICHARDSON.
Cawker City, Kansas.

I own and operate a J. I Case threshing outfit consisting of a 40-horse power steam engine and a 24x42 separator. This makes a good outfit for this country. In 1919 I threshed thirty-six days and thresh-

saving two band cutters, three straw stackers and also a man to handle the half bushel that measured the grain.

The worst thing we have to contend with here are poor bridges and side hills. We are not bothered with price cutters.

We have had all kinds of engines. I used to buy up engines, repair them and sell them again. I have had three Aultman & Taylor engines, one 16-horse power Avery, one 20-horse power Avery, one 16-horse power Minneapolis, one 12-horse power Minneapolis, one 22-horse power Minneapolis, one 20-horse power Huber, one 16-horse power Advance and one 15-horse power Rumely. I now have an Aultman & Taylor 30-60 tractor. I like this machine best of all. I think it is all right for

Were You One of the One Hundred?

ONE hundred readers of this magazine in each of ten states have been mailed a form in which they are asked to answer questions regarding our publication.

You may be one of the one hundred who represent your state. If you are, we hope you have answered the questions and returned them in the stamped envelope provided for that purpose.

Some states may have a perfect record; every letter may be returned. For each letter allowed to go unanswered, the state's record as a whole, in this novel contest to show reader interest, will be reduced exactly one per cent.

No names will be made public. The results of the answers, showing the relative positions of the states, will be published in a subsequent issue of this magazine.

We know you will be interested in seeing what position your state occupies. The average size of the farms owned by the hundred readers in your state will, for instance, rank your state in that respect. Your preferences of reading matter will be averaged.

Let us repeat. No names will be published. No individual returns will be revealed. The averages by states will be published, so our readers can learn about the fellows "around the circuit."

Be a good sport and answer soon. Don't prevent your state from making a good showing.

ed out thirty thousand bushels of grain, and in 1918 I threshed fifty-one thousand bushels in forty-two days.

The American Thresherman and Farm Power is a great help to me and I could not be without it.

JOS. L. ANDERLE.
Mosinee, Wis.

I have been in the threshing game with my father for twenty-four years. I have also read your paper for a number of years. It takes the tired feeling out of a fellow to read the letters from different threshermen.

When I first commenced to thresh we threshed by horse power, and we made a little money with that rig. We got four cents a bushel. Later we sold that outfit and bought a merry-go-round which we ran three years. That was easy money, but in the fall of the year when we were not running the merry-go-round we would go out in the country and watch the steam threshermen thresh. This gave us the fever to go threshing again, so we sold the merry-go-round and bought a steam rig. The farmers expected us to thresh for the same price as we did when we had the horse power, but we did not; we raised the price to five cents for wheat and four cents for oats. The farmers soon learned that they were

threshing, especially where water is scarce.

For the last three years we have been getting ten cents straight for threshing, and we furnish our own coal oil and gas. I mix the coal oil and gasoline half and half, which works fine. It costs us about eighteen cents a gallon and we burn about forty gallons a day.

V. W. HOPPES.
Long Island, Kans.

I have threshed for twenty falls. I started with a J. I. Case 32x54 separator run by horse power. I have used four different makes of machines, two J. I. Case separators, one a 32x54 and the other a 28x46, one Advance 28x44, one a Northwest 32x52 and a Russell 30x46. I have used a compound Russell engine, Advance, a J. I. Case and a 13-horse power Russell. My average run is from sixty to eighty-five days. I would advise not to go too fast and waste the grain, because what goes in the straw you do not get paid for. Put your machinery in shape before starting in the fall, and it will pay.

I have taken The American Thresherman and Farm Power for fifteen years. I have gotten lots of good information from it.

ALLEN C. JONES.
Honey Creek, Ia.



En-ar-co

SCIENTIFIC REFINING

"Crude oil is like a rainbow"

The elements of crude oil are so completely blended that it is as difficult to separate them as to separate the blended colors of the rainbow. To get complete separation through repeated distillations we make countless tests. Only in this way can the absolute purity of oil products be insured.

"The Oil of a Million Tests"

The secret of successful scientific oil refining is painstaking care and unceasing vigilance. In making EN-AR-CO oils we average over a million tests a year. It is only by this multiplying of tests that perfect products can be made. This thoroughness in our scientific refining processes is the protection we offer to users of our products.

Coal and other fuels are scarce and high. Use

National Light Oil

for heating, cooking, lighting, power

National Light Oil, like all other products of the National Refining Company, is distilled from crude oil (petroleum) with that painstaking thoroughness and completeness which marks all our scientific refining.

Incomplete distillation means a light oil—kerosene—which smokes, carbonizes and gives out unpleasant odors. National Light Oil, by its many tested and counter-tested distillations, burns clear and bright without smoke, without carbonizing, without odor. It will not char wick or burner, nor will it smoke up chimneys.

An oil heater, burning National Light Oil, will keep the coldest room warm and comfortable in rigorous weather. Its even burning heat insures the best cooking results in oil stoves and ranges.

Your lamps and lanterns will give a strong, white, clear light without smoking if you use National Light Oil.

EN-AR-CO MOTOR OIL
"The Oil of a Million Tests"

EN-AR-CO GEAR GREASE
For Differentials, Gears, Transmissions

WHITE ROSE GASOLINE
Clean—Uniform—Powerful

BLACK BEAUTY AXLE GREASE
The Best Substitute for Good Roads

THE NATIONAL REFINING CO.
2172 Rose Building, Cleveland, Ohio
Five Modern Refineries Branches in 92 Cities

It is unequalled for incubators and brooders where a steady, smokeless, odorless heat is required.

Used as fuel in your tractor it develops a maximum of power at a minimum of fuel consumption without carbonizing cylinders or valves.

Its freedom from impurities, its even quality, its tested uniformity, make National Light Oil the most satisfactory and economical burning oil you can use.

If your dealer can not supply you with National Light Oil—insist on getting it—write to us direct for prices on barrel lots, or more. It costs less to buy by the barrel.

EN-AR-CO AUTO GAME FREE

Here is a fascinating game in which autos compete in a cross-country race. Two, three or four play it. Only one game to a family.

Get this game for the children

Grown folks too will like it. Sent FREE when we quote you prices on National Light Oil on request. Write TODAY—USE THE COUPON.

USE THIS COUPON

THE NATIONAL REFINING COMPANY,
2172 Rose Building, Cleveland, Ohio.

Date

Enclosed please find 2-cent stamp to partially cover cost of packing and postage. Please send me EN-AR-CO AUTO GAME FREE.

Name

Street or R. F. D.

Post Office

County..... State.....

Please quote me price on NATIONAL LIGHT OIL.

I may use..... barrels

I now use..... gallons kerosene per year

Also quote on..... gallons En-ar-co Motor

Oil and..... pounds En-ar-co Gear Grease

I own..... Automobile

(Make of Auto, Truck or Tractor)

Bigger Wood Pile from less Work!

FUEL will be scarce this winter. Make sure of your supply and save money by using **Simonds Radial Crescent Cross-cut Saw**. A new and improved method of grinding the blade makes the teeth sharper than ever and prevents the saw binding, thus letting you do faster work with less effort.

Ask for this saw by its full name. You will be delighted with the way it works.



Simonds Manufacturing Company

"The Saw Makers" Established 1832
Fitchburg, Mass.
Chicago - Illinois

*Shorty's got 'em
breaking wide open!*

Buzzing on the Limited
West-O!

PETE ME BOY!

If you ever did have a doubt in your peppy old soul as to how Camels stand *nationally*, take a fly over the country! Gee, every time I swing around I see men smoking Camels or buying Camels or talking Camels! Every newspaper and magazine flashes Camel ads! Every billboard spills a scream about Camels!

Pete, you never can beat Camels expert blend of choice Turkish and choice Domestic tobaccos! Certainly does put it over either kind smoked straight! And say, do you get that mild Camel body! Oh gee, Pete, fire-up another Camel—That's the answer!

Now listen: I'm going to draw up some Camel ads and shoot 'em in and I'm going to tell the world whats-what about Camels! Bet you I can clean-up on a job like that—and it's all inspiration right from Camels themselves! For instance, Pete, I'm slapping this sketch down here to put you wise—Sav-vy? *I'll tell 'em old pencil, I see the point!*

I'll drop you a line from Chicago and tell you s'more! I'll have a baleful of stunts by the time this letter blows into your hands!

And—you know me, kid!

Shorty.

Camel

Study at Home! Learn Gas Traction Engineering while you work and earning money. We'll teach you by mail while you are working and earning money. Send for catalog. Address
CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

Uncle Silas

SHIPS that sail in the night are sometimes hardships.

FROM the way that some folks hang onto their dough, you'd think undertakers put pockets in shrouds.

SORTER keep in mind that polishing makes lots of difference in men, as well as in diamonds. Both are what they were until made what they are by rubbing.

THERE'S nothing in looks to brag about or feel humiliated over. In every monkey house you'll find one or more who resemble some grave-looking old Irish gentlemen of your acquaintance, yet an Irishman recently got into a row for calling a Norwegian a chimpanzee. Whoever heard of a Norwegian monkey?

IN going about with thy wing down, looking for a comely damsel upon whom to bestow thy affections, take them in singles from the sixteen-yard rise, and not in doubles or thy stalking will bring thee naught. Forget not this gospel, that though a woman be as honest as a child, yet will she lie to the man she loveth, and pretend that she loveth him not.

MAN born of woman is of a few days and full of prunes. He talketh about that concerning which he knoweth the least and generally gets by with it. Behold the fakir, and him that weareth a broad-brimmed hat and long hair and who spiebeth forth in a monologue about the healing qualities of patent medicines, concerning which he knoweth less than the man who concocted the potion, or the gullible simp who forks over a dollar for three cents' worth of physic. Every living creature hath its parasites and the human parasite is the biggest fakir of them all.

THE greatest trouble is that too many of us play politics too much. We are all too ready to dodge behind the stump of policy, rather than stand out squarely for our real convictions and help to mould sentiment, even though the shot and shell of opposition fall all around us. Ask the average man today, the average office-holder or office-seeker, a pointed question on any subject that might attract the opposition's lightning to the rod on his barn, and it's dollars to breeches buttons that he'll duck or hedge, and after he has stopped talking you'll know less about where he stands than when he began. I noticed this in the business world many years ago on several occasions, but in none more plainly than on the question of the International Harvester Company combining several companies into one. All the trade journals, without exception, either attacked them openly or covertly because combinations did not stand in public favor, and the concern composed of several units, which had helped "grease the ways" of these publications with liberal patronage, got the hooks when it needed friends, until the mist had blown away and they could come out of their cyclone cellars in safety. There was but one publication that dared stand out in the open and defend its friends, and you are reading that publication now, Ezra.

THERE is considerable red-tape about the ethics of labor these days. The Wisconsin law requires that boys or girls over fourteen and under seventeen years of age may work, during vacation, by securing a permit from the labor bureau for certain kinds of work only. If under sixteen years of age, they must not be employed before seven o'clock in the morning or after six o'clock in the evening.

The parent, guardian or custodian of a child from fourteen to seventeen years must accompany the boy to the Industrial Commission, and show birth record and give his pedigree in detail, when a permit is given which must be filed with the person or corporation employing the minor.

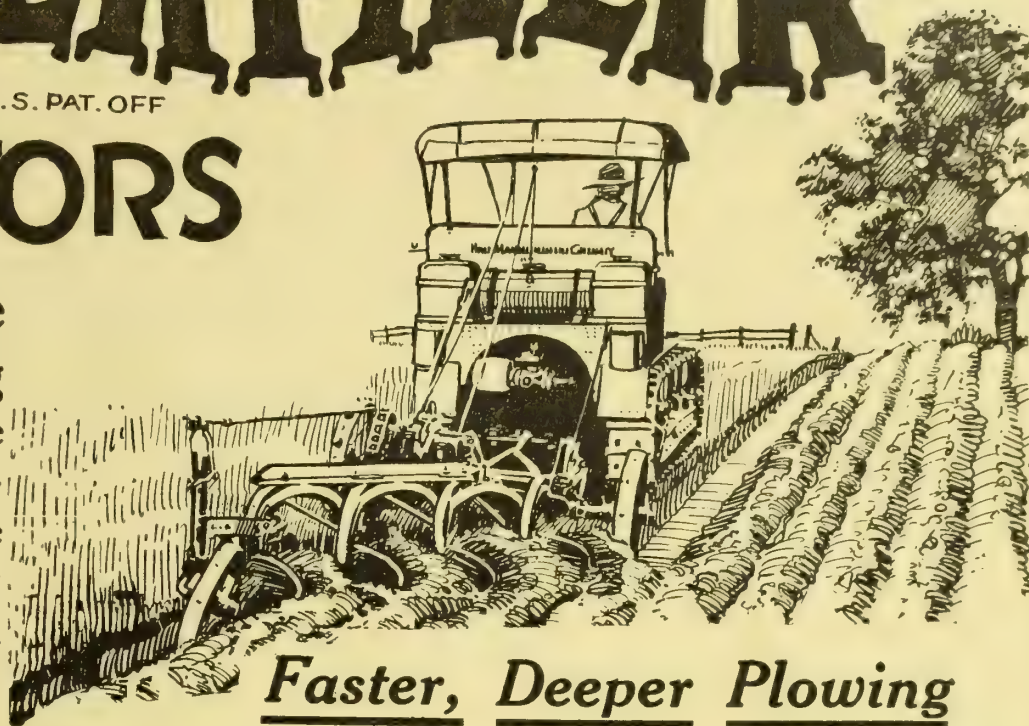
I don't know how much of this law applies to boys or girls living on the farm, but these may not come under the same class in Wisconsin, as farmers, boys and girls, old folks and all are supposed to do most of the work that's done anyhow. When Sile was a boy, he used to have to get up at four o'clock in the morning, drive the horses in from the pasture, feed, curry and harness them, feed the pigs, milk the cows and do anything else that seemed reasonable, and do the chores in the evening which, as any real farmer knows, often requires working until far later than six o'clock. It's right and just to protect the children from being imposed on, but we were considered a tolerably healthy crowd in the days when men were required to begin their day's work before eight o'clock in the morning, and to continue long after five o'clock, the time set by labor unions and others in which to earn our daily bread. We are apt to underwork rather than overwork these days, and the tendency to create an aristocracy of laziness seems to be improving with age.

CATERPILLAR

REG. U. S. PAT. OFF

TRACTORS

Dealers everywhere are realizing the big possibilities in the sale of "Caterpillar" tractors because every sale means a permanently satisfied buyer — and solid dealer profit.



Faster, Deeper Plowing

Three miles per hour, with the pull of a dozen-odd horses concentrated at the draw-bar—all under easy, quick control of one operator. ("5-Ton"—40-25 H. P., 4 plow), ("10-Ton"—60-40 H. P., 6 Plow.) Power to leave deep, even furrows in the stiffest sod or stubble; to pull a big load of harrows or seeders on the *mellowest* seed bed. **No** slipping and no fuel waste. **No** packing so cannot injure any soil.

Holt patented steel tracks—heat treated for long service by our own process—have carried business farmers and road makers through season after season of hard work.

The "Caterpillar" will fit every power job on the farm—belt, field or road, and earn real profits by year 'round service and satisfaction.

The Holt Manufacturing Co., Inc.

Stockton, Cal.

Peoria, Illinois

Spokane, Wash.



D-1

FROM THE **BALE** TO THE **BELT**
In the ACME Plant



Atlas REPEATERS!

Atlas Belts must be well thought of by farmers, from the way they're re-ordering.

They don't buy Atlas just once—and then switch over to some other kind. No sir-e-e! They come again and again, which in our opinion is pretty good proof that they're satisfied.

The one thing that you want most of all in a canvas belt, you get in the fullest measure in Atlas. You want long wear. And Atlas are chock-full of that. They're full capacity, full speed, full time belts. Seldom a break-down—never a regret.

If you have difficulty in getting Atlas from your dealer—order direct from us. We'll ship immediately.

Atlas are repeaters. They're good to know—good to stick to.

ACME BELTING COMPANY

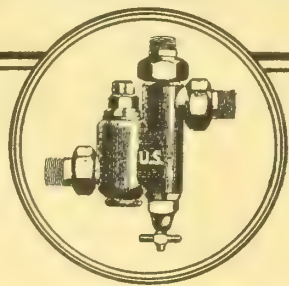
Manufacturers

NILES

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FARM BELTS

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam traction field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Boys and Girls

The Dependable Boy

The boy who is bright and witty,
The boy who longs for fame,
The brilliant boy, his teacher's joy,
And the boy who leads each game—
Right cordially I greet them
And wish them every joy;
But the warmest part of my boy loving heart
I give the dependable boy.

If he says he'll come at seven,
Ere the clock strikes he'll appear
At a fine, brisk pace, with a glowing face,
And a greeting good to hear.
If he says he'll mail your letter
It will be mailed, don't doubt it;
He will not tuck it in some dark pocket,
And then forget about it.

He may be bright and witty;
He may be brilliant, too;
He may lead in the race with his manly face,
He may plan great things to do;
He may have all the gifts and graces,
But naught can make such joy
And pride in me, as to know that he
Is a staunch, dependable boy!

—Selected.

The Dwarf and the Giant Boy

BY CAROLYN SHERWIN BAILEY

Once upon a time there was a family of Giants who lived in the land of Let's Pretend, and they had a young son who was not afraid of anything.

He was so strong that he could play marbles with boulders, and he was so plucky that he did not mind in the least when the other people laughed at him because he had a dwarf for his very best friend.

No one could understand why the giant-boy loved the dwarf who lived in the woods, for he was rather a grasping, disagreeable little fellow. But the giant-boy used to look for the dwarf almost every day, creeping carefully through the woods on his hands and knees, hunting for him.

When he found the dwarf, the giant-boy would sit him on the tip of his little finger and run with him over the hills and back again. It was like the steeple-chase for the dwarf. Or the giant-boy would put him on a leaf and blow him way up in the air, catching him safely when he drifted down. It was like a ride in an airship for the dwarf.

When the giant-boy was ten years old, it was time, according to the custom of the country, for him to go out and test his courage and if he came home as brave as he started, his giant-father would give him a beautiful wooded mountain to be his inheritance. His giant-mother gave him several bushels of apples and five hundred sandwiches and a barrel of milk to carry with him, and she told him that when these were gone, the giants along the way would be glad to give him food and shelter.

So the giant-boy started out with his heart full of courage, but he had gone only a little way when he met a storm. It was a terrific black storm that came rumbling down from the sky and crashing over the hills. It brought fire and thunderbolts with it and it seemed to shake the whole earth. Going into such a storm was like marching alone into an advance-

ing army, but the giant-boy did it and he was soon safely through the storm, just by facing it.

He met bravely all kinds of things, the dark, strangers and larger giants and unknown places and new kinds of hard work. He grew older and nearer to being a giant-man before he turned toward home again. When he was almost there, he entered the forest and whom should he see but his old friend, the dwarf, digging beside a stream!

"Here I am! Are you not glad to see me?" the young giant called as he stepped across the stream with one stride.

"Let me alone. I am busy," the dwarf replied. Then, without looking up, he threw a pebble at the giant. It hit his heart and he heard a loud crack.

"Now I have lost my inheritance," he said to himself, "my heart is cracked."

"How did that happen?" his giant-father asked when the boy reached home.

"I met and conquered storms and all kinds of dangers," the giant-boy answered, "but my friend, the dwarf, threw a pebble at me and it cracked my heart."

"Oh, I should have told you about that before you started out," his giant-father said, taking down a big book of rules that could be used in any land as well as the land of Let's Pretend. He read from it: "The misdeeds of others can do us no permanent harm." "So the dwarf's meanness doesn't count against you," he said, "it only counts against the dwarf."

So the giant-boy was given a beautiful wooded mountain for his inheritance and the crack in his heart soon grew together. As for the dwarf, he was always a little lonely dwarf and never grew up to be anything else.

From Our Boys and Girls

DEAR AUNT JANE:

This is my first letter to you. I am a girl ten years old. I am in the fifth grade. I have a pet pony whose name is Billy. I have a saddle for him. I have three sisters and one brother. Their names are Elizabeth; she is the oldest and is deaf; Emma is eighteen years old; Josephine is thirteen, and my brother's name is August and he is eight years old. For pets I have a cat and dog. The dog's name is Rex. We have three hundred chickens and seventy ducks. Papa takes The American Thresherman and Farm Power and I like the Children's Page. We live in the country five miles from Tower City. My father owns an

Overland car. We have twenty-four horses and eight milk cows. We go to school every day. I think my letter is getting long so I will close. I hope to see it in print.

Your niece,

ROSA PLECITY.

(Write us more about your school, Rosa.—AUNT JANE.)

DEAR AUNT JANE:

I was glad to see my letter in print. You wanted me to send my brother's picture so in this letter I have enclosed it. He is just home from Sunday school. He has his Sunday school paper in his hand. In the background of the picture you



Dorcas Haun's Little Brother.

see the concrete road and a corn field. I thank you for putting my letter in print. Papa and mamma were glad to see it, but none as glad as I. Your niece,
Shiloh, Ohio. DORCAS HAUN.

DEAR AUNT JANE:

As this is my first letter to you I hardly know what to write. I am a girl twelve years old and will start seventh grade work in school this fall. My father has one Advance-Rumely separator and one Rumely engine and a new Baker separator. I have written but one letter from this town. We have two horses named Mack and Betty and a jersey cow. I have three brothers and two sisters. Their names are Edith, Mave, Chester, Howard and Robert. Edith is seventeen, Mave is seven Chester is ten, Howard is ten and Robert is six. For pets we have a cat and two kittens. Well, as my letter is getting long I will close.

Your niece,

DOROTHY BARD.

Corunna, Ind.

(Your "first" letter is very interesting, Dorothy. Write again.—AUNT JANE.)

"There's A Power-ful Difference" in MAGNETOS

IF you want to get out of your tractor all the power that's in it, be sure that it is equipped with *Splitdorf*—the Magneto that fires sparks that are *always the same*.

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DEAR AUNT JANE:

I am a little girl eleven years old. I am in the sixth grade. My teacher's name is Mr. Grover Graves. I like him very much. I have six brothers and two sisters. Their names are Thelma, Bertha, Everett, Earl, Elmar, George, Herbert Lee, and little baby brother Paul Glenn. He will be a year old the twenty-fifth of October. Everett is the oldest boy and Thelma the oldest girl. My papa takes The American Thresherman and Farm Power, and I enjoy the Boys' and Girls' Page. We have two cows. For pets I have two dogs named Poodle and Sport. I hope to

see my letter in print as I want to surprise my papa.

Your niece,

EDITH ELVIRA ADAMSON.

New Salisbury, Ind.

(Can't you send a picture of little Paul Glenn for our page, Edith?—AUNT JANE.)

DEAR AUNT JANE:

I have seen letters in The American Thresherman and Farm Power and all have been from California, Minnesota, Dakota, etc., but none from Wisconsin. I am thirteen years old and in the seventh grade. My teacher's name is Miss Becklund. I

have a pet rabbit named Bun, a dog named Patty and a cat named Silver Plume. She is a Persian smoked cat. There are not very many in this country. My uncle takes The American Thresherman and Farm Power. I have no brothers or sisters. I wish some of the girls would write to me. My letter is getting long so will close.

Your niece,

HELEN CARLSON.

Brule, Wis.

(I am always glad to get letters from Wisconsin, Helen. If you watch closely, you will often find one.—AUNT JANE.)

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Whose Truck Will the Farmer Buy?

(Continued from page 5.)

manufacturing end, and who will survive?

A new era in the farm truck game has been reached. When the writer was assigned the job, over six months ago, of forecasting the farm truck situation, he began a series of visits to motor truck factories that enabled him to compare the methods and attitudes of fully half the manufacturing motor truck companies of the United States.

There are over one hundred companies making motor trucks today—or were last May. Within two years there will be less than half this number. I'm not wishing calamity on anyone; it is inevitable that the small assembly plants, improperly located geographically or without the means and distributing facilities to compete with strong companies, cannot long endure.

In most cases, the company that can market something besides the one expensive, commercial-use product, has an advantage. The big companies that have combined passenger cars with trucks have done well, whether their article is a light delivery car job (almost a passenger car with a commercial body) or else a distinct truck, with separate truck executives, engineers and sections of factories. The marketing advantage held by such a company is considerable.

To be sure, there are corporations engaged in making exclusively real trucks of such quality that their product will, on its merit, always assure them of eager dealers and purchasers. Some of these companies have made comparatively little effort to establish themselves in the farm field. The average farmer who admits an interest in the subject of trucks does not have the familiarity with truck names and quality that he does have when he speaks of tractors or automobiles.

Most men like to buy an article bearing an established and familiar trade-name. The farmers of this country are no exception to the rule.

The machinery manufacturers have for some time past been watching the farm motor truck field. Under the trade conditions which have existed during the past year, no manufacturer wanted to enter production on a new line unless sure of two things—an assured source of raw material and a stable group of purchasers.

This is easy to understand. The fiscal year included between July 1, 1919, and June 30, 1920, was a "seller's year." The maker of farm power machines could forecast his sales if he could foresee what his purchasing manager and the railroads could do for him. For once the sales department was overshadowed. It was easier to sell finished products than

it was to buy raw materials and necessary parts.

Conditions are changing. The production end of the automotive industry has caught up with the sales end. This situation is not confined to the automotive industry, either. Manufacturers of farm machinery, having a breathing spell after the sustained effort of maximum production, are sounding supplemental fields.

Of all the prospective business floating before covetous eyes, these days, motor truck business is the most fascinating. If all the thought, effort, traveling and money that has been expended in learning of the motor truck business, during the past year, could be lumped in one big pile, we would have enough means to dig a second Panama Canal or to build a few more Woolworth Buildings.

The reason for this lies in the history of success in the automobile business. From nothing in 1900, this business has grown in twenty years to almost the top of our American industries. One big factor—the biggest factor—in putting this over, was the farmer. Originally personified by the backwoods character who rose in his wrath and shook his fists at the early automobiles that frightened his horses, today news stand magazines show the farmer traveling by high-powered machine.

The farm field was able to sustain the sales end of the automobile game, after the first wild spurt had missed it entirely. As a result, there are over eight million passenger cars in the country today. The prophets in the motor truck field seem agreed that history will repeat itself. Perhaps total numbers will not approach the pleasure car figures; yet, with less than a million trucks in the country today, the field looks lush and virgin.

Implement manufacturers seem to think they are logical men to make farm trucks. They have an established trade-name, so it's a certainty the farmers know them. Their sales organization is complete; they merely make an addition to an almost complete line. Most important of all, their one field is the farm, and they must produce what it needs.

Established truck companies of quality, on the other hand, put forward some excellent arguments why, by concentrating on the development and improvement of their one product, motor trucks, they can produce a better machine at a more reasonable price.

The farmer who is to do the buying is the one to judge between such claims. It is worth noting, however, that from the farm machinery factories the motor truck is emerging to take its place with other farm power aids. The time is at hand when the farmer will make his choice.



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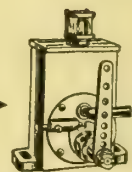
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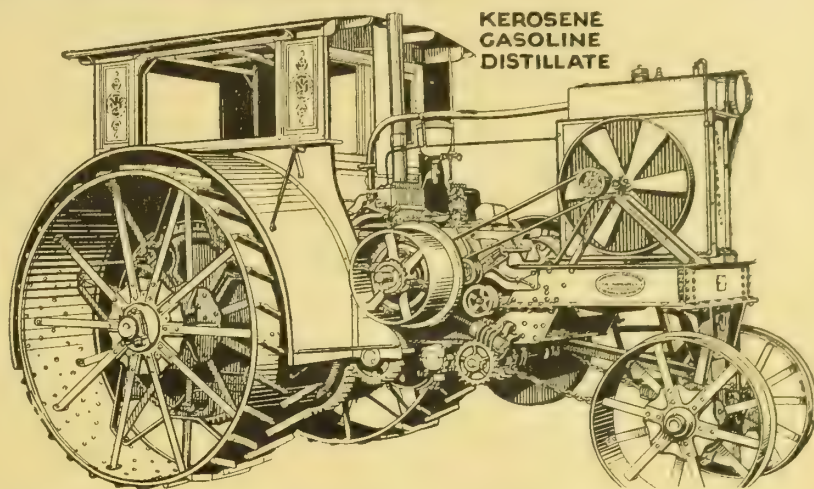
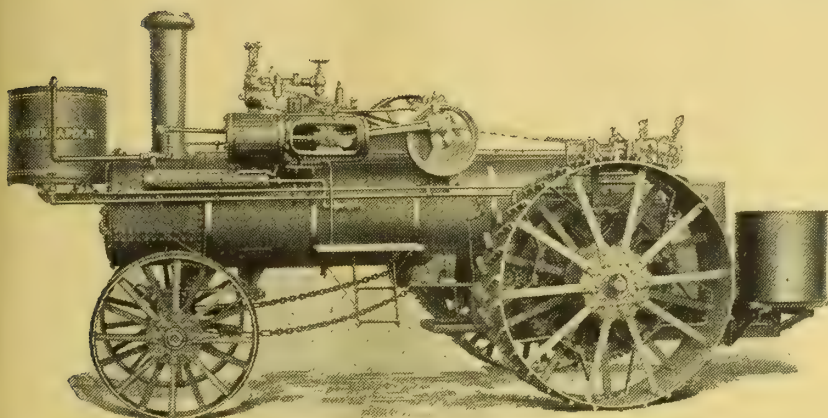
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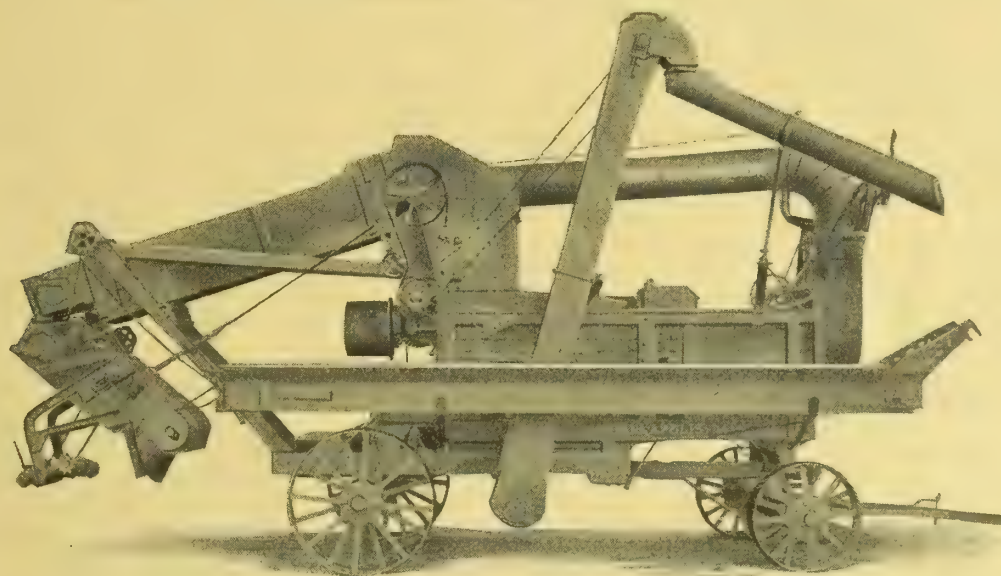


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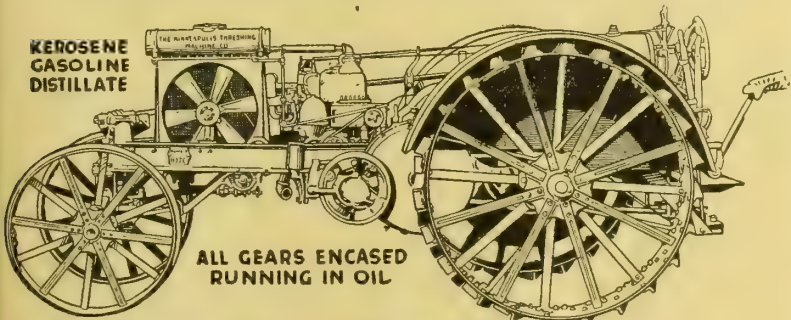
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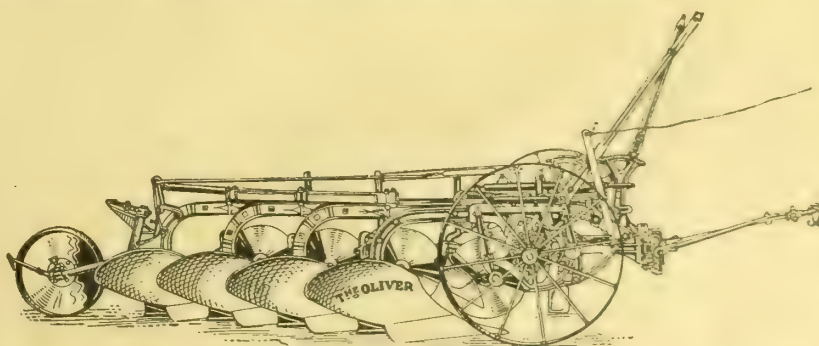
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32x3 1/2	7.50	2.25	34x4 1/2	10.50	3.00	37x5	13.50	3.75
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The
AMERICAN THRESHERMAN
FARM POWER

Benefits from Farm Power

(Continued from page 7.)

the world had moved forward and the younger generation would not be content to carry on their agricultural work with the same implements he had used as a boy. After considerable thought, the farmer decided to keep his boy at home at any cost, so he reluctantly bought a tractor, secretly hoping that the "darned thing" wouldn't work anyhow and cure his son of his folly. But it did work, and worked so successfully that before very long the father had become as enthusiastic over his iron horse as the son, and a new era of progress dawned on that farm. Not only was most of the field work done with the tractor, but a small gasoline engine was bought and installed in the basement of the house, to handle the washing machine, the cream separator and the water pump that found their way into that home. Later, a larger stationary engine was bought for the barn and various labor-saving machines were installed to grind the feed for the stock. A garage was built to house the automobile and tractor and at one end was established a machine shop, with lathe and the simple tools necessary to make repairs to the engines and machinery on the farm. Several power farming magazines were subscribed for, and these were read by father and son. The older man found that, in spite of a lifetime's association with stock, he took more interest in the mechanical source of power on his farm than in his animals, and he began to understand what passes through the minds of the younger boys when they hear the chug-chug of a power plant.

From a material standpoint, this farmer found that his investment in the tractor and gas engines paid big dividends, for he was able to carry on his usual farming operations in a fraction of the time previously required with stock, and he could dispense with some of his hired help. His boy's interest in the farm was now so deeply rooted that you could not pull him away even for a circus. Together they planned the development of some waste lands they never seemed able to spare time enough to develop in the old days. With the help of the tractor, the sod of an old pasture was turned under and converted into a growing field. A patch of sodden and sour land that lay along the creek was drained and sweetened with lime hauled from a nearby hillside. The farm woodlot was thinned out and the dead and down trunks were sawed into cord wood with the tractor motor, and the surplus sold in the neighboring village. The road leading from the farm to the public highway was put in shape by being dragged and graded

with power supplied by the versatile tractor. A storage reservoir was built at the upper end of the pasture and was filled with water pumped from the nearest creek. A silo was built and filled with the corn husks that were formerly stacked and left in the fields, where most of them were wasted as feed. Crop rotation plans were tried, and the soil studied to determine what it lacked. The son, with the start given him by his short term in the agricultural college, became enthusiastic about the development of the farm not so much for its earning capacity (which was not overlooked), as from the standpoint of applying modern agricultural practices. Father and son practiced seed selection and the development of species of grain best suited to their soil conditions. With the power supplied by their tractor (a new and larger machine was later purchased), and with modern implements bought to go with power farming, the routine work of a crop year was carried on methodically and without hitch, leaving time to work out other problems apart from the growing crops. The old orchard that had been allowed, in the old days, to virtually take care of itself, was studied, and steps were taken to bring it up to its highest state of development. Trees were pruned and selected varieties were grafted onto the old limbs. Weeds were kept out and cover crops were planted between the rows to enrich the soil. The tractor was largely used in orchard work for it plowed and harrowed between the trees and at spraying time the tractor motor was belted to the spraying machine. Somehow, the old farmer used to say he never found time to do these things when he had to rely on his work stock, but now with the tractor all these things could be done and yet there seemed ample time to play and carry on new work.

When all the improvement planned for the orchard had been carried out, and that adjunct of the farm was turned from a liability to a valuable asset, father and son turned their attention to improving the live stock on the place. Some pure blooded sires were secured for the cattle and hogs, and the process of building up the home herds was begun. The best feeds for stock were studied and experiments carried out to determine the quantity and mixture which would produce the best results. To provide the proper silage mixture, small fields were laid out for the growing of grains to mix with the corn stalks, and an alfalfa patch was laid out and irrigated from the reservoir built in the upper pasture. All of these things were done in addition to carrying on the regular

farm routine, because the machinery on the farm was releasing for other duties much of the time of the men.

With the aim of constant development instilled in the minds of father and son, in the course of several years that habit became second nature, and there was always some new project on foot to be commenced with enthusiasm upon the completion of the work in hand. A windbreak was planted along one side of a field that was subjected to too much wind, and the front yard of the farm place was carefully levelled and planted to blue grass. When the lawn was fully developed, a croquet ground was laid out and helped to entertain the folks in the long summer evenings. Electric lights were installed in the home and in the barn and feed lots, power for which was generated from a portable plant installed at small expense. A furnace was built in the basement and the house warmed for the cold winter months. With the development of the science of farming, came also a broadening of the mental and social life of the household. The automobile made possible frequent trips to the city, and the increased earnings enabled the members of the family to enjoy high-class entertainment, such as the concerts of great artists, and the better class of plays. The movies of the nearby village opened up a new world, by picturing

before their eyes the world events that were happening in all the spheres of life. Good books and magazines came regularly to the home, and could be enjoyed in the newly acquired comfort of better lights and more habitable rooms. The piano and the talking machine supplied the music for dancing, or taught them the latest popular airs, and all the comforts and refinements of the city were equally available to the members of this country family.

Now, of course, all of these things were not directly attributable to the tractor, for some of them would have come to this family whether or no. But the important things, the development of the farm, the saving of time, the creation of enthusiasm in the mind of the young farmer boy for that farm, and the development of his character and the expansion of the mind of the father, all followed the introduction of the tractor on that farm. It brought increased efficiency in the farm work, it saved the time of man and boy and diverted it to the other useful purposes, and it formed the foundation on which is being built in this country the newer agriculture, manifested in the co-operative societies of the elder farmers, the boys' and girls' pig and poultry clubs, and the women's canning clubs. Power farming is one of the "mud sills" on which this new structure of agriculture is built.

Take Care of Your Oilstones

BY F. H. SWEET.

LIKE many things, an oilstone can be ruined by wrong treatment and lack of care. There are three objects to be attained in taking good care of an oilstone: First, to retain the original life and sharpness of its grit; second, to keep its surface flat and even; and third, to prevent it from glazing. To retain the original freshness of the stone, it should be kept clean and moist. To let an oilstone remain dry a long time, or exposed to the air, tends to harden it. A new natural stone should be soaked in oil for several days before using. If an oilstone is kept in a dry place it should be kept in a box with a closed cover, and a few drops of fresh, clean oil left on it.

To keep the surface of an oilstone flat and even, requires care in using. Tools should be sharpened on the edge of a stone as well as in the middle to prevent wearing down unevenly, and the stone should be turned end for end occasionally. To restore an even, flat surface, grind the oilstone on the side of a grindstone and rub it down with sandstone or an emery brick.

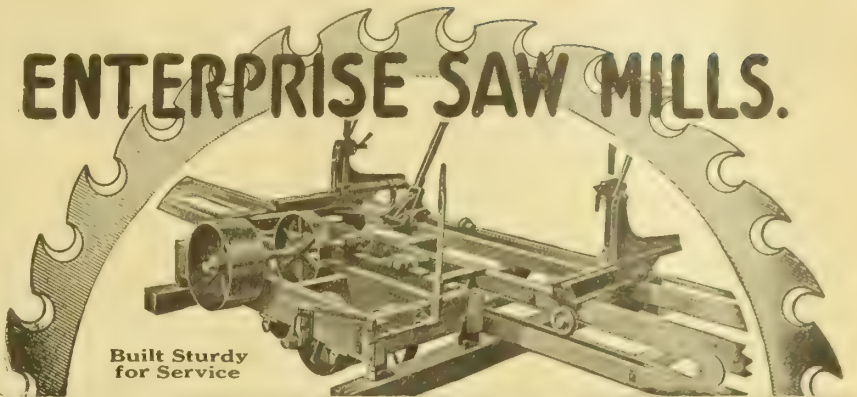
To prevent an oilstone from glazing requires the proper use of oil or water. The purpose of using either

oil or water on a sharpening stone is to float the particles of steel that are cut away from the tool, thus preventing them from filling in between the crystals and causing the stone to glaze. All coarse-grained natural stones should be used with water.

On medium and fine-grained natural stones and in all artificial stones, oil should be used always, as water is not thick enough to keep the steel out of the pores. To further prevent glazing, the dirty oil should be always wiped off the stone thoroughly as soon as possible after using it. This is very important, for if left on the stone the oil dries in, carrying the steel dust with it. Cotton waste is one of the best things to clean a stone with.

If the stone does become glazed or gummed up, a good cleaning with gasoline or ammonia will usually restore its cutting qualities, but if it does not, then scour the stone with loose emery or sandpaper fastened to a perfectly smooth board. Never use turpentine on an oilstone for any purpose.

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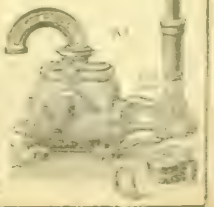

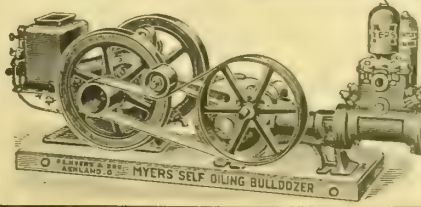
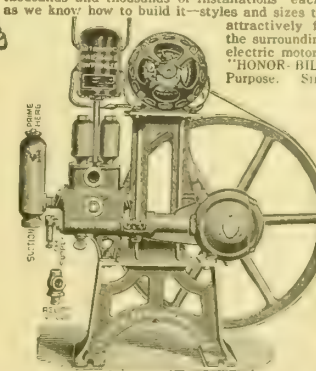
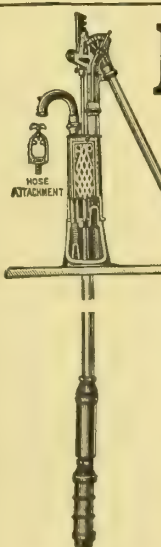
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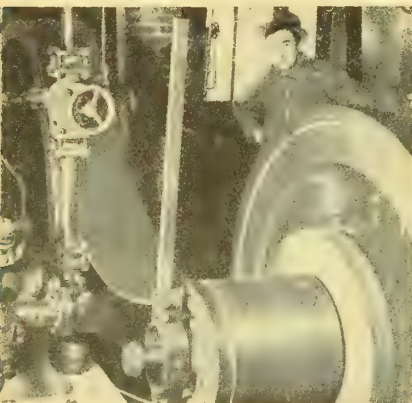
The style illustrated here is especially constructed for engines with flat drawbar. It is made for three sizes of bars, ¾x 2½, ¾x3 and 1x4 inches.

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The Right Way to Plaster

S. H. FRANKS

ARE you going to plaster your house? One of your friends has probably told you that three-coat work is the only satisfactory method and that it is well worth the additional twenty-five per cent. that it will cost. Well, is it? A neighbor recently had parts of his house plastered for the third time. He had used three coats each time, and each time the plastering had chipped and cracked or fallen.

The truth of the matter is that on fine work, where cornices, moldings or covers are to be run, good workmen can do a far better job with three coats than with two. As a matter of fact, however, unless you have an experienced and conscientious superintendent, you are likely to get a two-coat job where three coats are specified. The reason is that plasterers are getting into the habit of flushing the finished surface while the second coat is still wet; thus making practically a two-coat job. An experienced architect tells me that on straight work, where there are no elaborate moldings, he specifies two-coat with patent plaster. If he asked for three-coat work he would get a higher estimate and the same sort of a job. If the walls of the house have been built particularly straight and true, two coats of plaster are just as good as three. The walls are not likely to be so, however, and then the plastering will probably be so uneven that the baseboard and casings will not fit closely against it.

Probably the most fruitful cause of unsatisfactory plastering is insufficient slaking of the lime. Before all the little particles have been reached by the water, the hair and sand are thrown in and the mixture slapped on the laths. For weeks and months afterwards little lumps of lime continue to absorb water and explode, causing small cracks or blisters and throwing off little chips from the surface. When the big library in Boston was built, it is said that the lime for plastering was slaked one whole year before mixing. Allow at least a week for this chemical action, keeping the lime in a tight box outside.

Hair is mixed with plaster to give it tenacity. Watch the next mixer you come across; he probably will turn the hose on some dry lime, hoe it back and forth for a few minutes, then hoe in the hair and mix the two. The result is that the hair is so burned that it retains no more of its tenacity than does a toothless dog. It is far harder to distribute the hair evenly throughout a mass of lime putty than when there is free water to help break up the lumps; nevertheless, for the sake of a good job see

that the hair does not go in for twenty-four hours at least after slaking, and a week would be better. Long ox-hair is best; goat's hair is not strong; short cattle-hair and horse-hair are of the least value. Chopped manilla fibre is largely used also.

River sand is best for plaster. Pit sand is liable to contain clay, and sea sand is not so angular so that the lime does not bind it so closely together. If sea sand must be used, see that it is washed in fresh water to take out the salt. Here are the proportions and best methods of applying three-coat plaster: *Scratch coat.* For every cask of lime use 5½ barrels of screened sand (2½ barrels to 100 lbs. of lime, where the latter is sold by weight). Use 1½ bushel of long ox-hair for each cask of lime. Apply ⅜ inch to ¼ inch thick over lath, pressing in with trowel to get a good clinch. When this coat has commenced to harden (2 to 4 days) scratch it diagonally both ways to about half its depth with a comb made of a row of nails in a stick. *Brown coat.* This should be applied only when the scratch coat is thoroughly dry. (All intelligent plasterers admit this, but, as it involves extra labor in moving the staging, it is almost never done unless insisted upon.) Same proportions of lime and sand, but with ½ bushel of hair to each cask of lime. Apply ¼ inch to ⅜ inch thick, bringing all surfaces to a true plane. *Finishing coat.* There are two kinds, known as "skim coat" and "white coat." The first is made of week-old lime putty mixed with fine white washed beach sand. It is put on with a trowel, floated down, then worked to a hard polished surface with a brush and small trowel. In most localities, however, the "white

coat" is used. It is a mixture of 90 pounds of plaster of Paris, and 50 pounds of marbel dust, which covers about 100 square yards. The plaster of Paris and marble dust are mixed with lime putty in small quantities just before using.

A sand-finish plaster surface is obtained by applying to the brown coat, before it is quite dry, a mixture of lime putty and sand, as coarse as desired. Float with a soft pine or cork-faced float.

For 100 square yards of three-coat plaster work you will require 3 casks of lime, 3 one-horse loads of sand, 1½ bushel of hair, and 2,000 laths.

A thoroughly satisfactory job may be obtained in the manner described, but there are so many chances of getting a poor one that ready-mixed and patent hard wall plasters are now being extensively used. There are two kinds, those made from natural cement found in Kansas and Texas, and the patent chemical plasters made from gypsum, to which something is added to retard the setting. The cement plasters are slow setting, not reaching normal strength for from thirty to sixty days, but they stick firmly to brick, stone or wood without the addition of hair. You can buy the patent plasters ready to add water and apply. They are put up in 100-pound bags mixed with sand and fiber for the scratch coat and with sand only for the finishing coat.

Another modern development in plastering is the substitution of wood or metal lath for a manufactured article, which combines lath and one coat of plaster in a non-inflammable board. The substance is made in sheets 32x36 inches, so that the joints are nailed directly on the studs as ordinarily spaced. A brown coat and a white coat complete the wall, whose qualities as a fire retardant and sound deadener are increased in comparison with the ordinary wood or metal-lath partition.

Tested Methods of Nut Locking

BY F. H. SWEET.

THERE is no mechanism in which it is more important to keep the nuts, bolts, and other fastenings tight, than in the automobile; for these are operated at high speeds over rough roads and are subjected to considerable vibration.

As is well known, vibration in machinery causes the various parts to loosen. While there are a number of methods of locking nuts and bolts to keep them from becoming loose, a practical method for use in automobile construction must be such that the nut can be removed when desired without destroying the nut lock. For example, it is possible to lock a nut securely by having the bolt a little longer than is needed and by riveting

the projecting end after the nut is screwed in place. While this insures against loss of the nut, it is apparent that when the nut is to be removed it is first necessary to chisel or file off the riveted portion of the bolt.

A large number of practical locking means for nuts and bolts are on the market. "The grip nut" is a supplementary nut of peculiar form which is put on over the regular nut. These are blanked out of a bar of steel having an arch running through the center, and the nut is threaded through the arch. When it is screwed in place it is deflected by pressure so as to produce a locking friction upon the thread. When screwed down tightly it is impossible for the nut to

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vibrate off, though it may be easily removed with a wrench.

Another device of similar form, which is known as the "hugtite," is rather popular. This looks like a thin nut, but instead of having threads there are two tongues extending from either side towards the center, engaging the bolt threads. These tongues are formed so that, when the locking member is in place on the bolt, its faces are not parallel to the face of the nut, as one edge touches the top of the nut and the other does not. If the big nut tends to loosen from vibration it will bear against the locking member, and the friction produced between the tongues and the bolt threads will prevent the main nut from coming off.

The castellated nut and cotter pin is so widely known and used that it requires no description. Lock washers have been devised in many forms. These for the most part are made of spring steel, which must be flattened out when the nut is screwed down tightly. Some of these depend merely on spring pressure, though others have barbs or ribs which are intended to dig into the nut and prevent it from coming loose. The ribbed washer is put in place with the rib uppermost, and when the nut is screwed down the rib forces a small part of the metal from the nut into the thread, and in this way locks the nut securely. The other forms, such as the "positive," "National," and "Hobbs barbed," depend upon the principle of one point digging into the nut and the other into the metal the washer seats on.

The "Columbia" lock nut is a very popular pattern, and is virtually a double form. The nut proper is split and tapered on the outside and fits into the hexagonal outer shell, which is tapered inside. When the nut is screwed down tightly, the inside part sliding on the shell draws the threaded portion together and forces the threads of the nut into a close contact with the threads of the bolts. One of the very good features of this lock nut is that it may easily be removed with a wrench, yet absolutely cannot come loose or harm the thread.

The form of lock known as the "Absolute" works on the principle of utilizing the locking properties of a rolling wedge. There is a recess cut in the inner surface of the nut in which a locking pin travels, this being of such a size that when the nut is screwed onto the bolt, the angle sides of the locking pin fit into the threads of the bolt. The flat surfaces of the locking pin travel against the angle top of the recess of the nut, rotating in its deepest portion. The top of the recess is at such an angle that the nut is automatically and continuously locked against any backward motion which serves to wedge the pin more tightly in position. It is

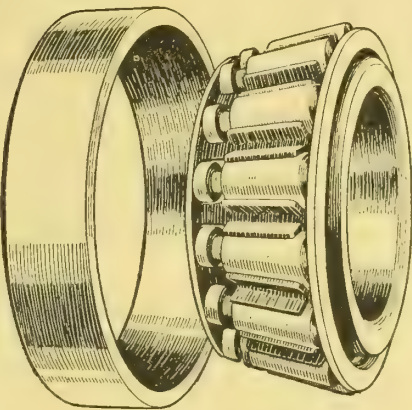
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KANSAS CITY
ST. LOUIS
COLUMBUS

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easy to take this nut off, and can be accomplished by inserting a small brad or piece of wire into the recess to prevent the pin from rolling up into the small part of the recess when the nut is unscrewed. This nut is more practical in the larger sizes than it is on the small size nuts widely used in automobile construction.

Another system of locking depends upon preventing movement of the nut after it has been screwed into place by a projecting tongue bent up against the nut. As an example we have the "Universal" washer. This looks considerably like a spring washer, but differs in that it has a little tab or tongue that the nut rides over as it is screwed into place, and when the nut is tight the tongue sticks up and prevents the nut from turning back. This washer is made of hardened steel and has projections on its under side to prevent it from turning. Still another type of locking device that is very simple is the "Reliance." This is nothing more than a plain washer with a couple of tongues extending from the outer periphery, which are bent against the nut; and the piece of nut bears against it. One called the "Bartley" lock has been used for some time on railroads. This is nothing more than a plate, which slips over the bolt like an ordinary washer, and when the nut has been drawn up tight there is

a little tongue which can be turned up against one of the facets of the nut.

The "O. K." lock nut consists of a spring washer having the end formed to fit in little depressions formed in the nut and in a supplementary washer which is keyed to the bolt, which is slotted. The corrugations in the bolt head and supplementary washer prevent the nut from turning, even if it is not screwed down as tightly as is necessary with the regular form of spring washer.

A lock which works somewhat on the principle of the castellated nut and cotter pin is another popular safety fastener. In this method the bolt is slotted and a piece of strong and ductile wire is placed in the slot, the lower end of which is formed into a washer to fit between the nut and the surface through which the bolt is passed. When the nut is drawn up tight the end of the wire, which lies into the bolt slot, is bent into one of the castellations of the nut.

The "Campbell self-locking" cotter pin has been designed to replace the well-known spring cotter. This is of such form that it may be easily inserted in a hole, and when in place can be locked by hitting the loop or eyes with a hammer, which drives the short leg down, springing the bent leg and forming a very effective lock. This cotter is made of half-round stock, the same as the ordinary

type, but has an offset eye and the two limbs forming the body of the pin are of unequal length. The pin may be easily removed when desired by inserting a screw driver blade in the flattened eye and pulling the straight leg out of contact with the bent leg, which makes it possible to withdraw the pin. A method of locking a nut is by a bent plate having a hexagonal hole to fit the nut, held tightly at the other end by a screw threaded into the piece the nut retains, or some other fixed part. This, however, is seldom used, as it is bulky and cumbersome.

Don't Buy Inefficient Machine

BY W. F. SHAFHORST

Sometimes buyers complain about their machines being inefficient after it is too late. They say that they were "stung." I know of a case of this kind in which the machine used was guaranteed to render a certain performance, but from the start it failed to do so. The guarantee was good for one year only. Both the manufacturer and user were to blame, I contend, because the machine certainly wasn't "as represented," and the buyer was too lenient. The manufacturer insisted that after a time when the machine was properly "worn in," it would come up to the prescribed mark. But

it never did, and the owner is still waiting. The year has passed and the guarantee is no longer active.

This does not happen often nowadays, because most reliable manufacturers are willing to make good even after several years, guarantee or no guarantee. The point I want to make is that there is seldom any excuse for buying inefficient machinery of any kind, unless one sets out to buy something cheap. One can hardly expect a cheap product to be efficient. Before buying expensive machinery, though, one has several ways of determining beforehand whether or not that machinery will be efficient. Manufacturers are generally willing to make tests before the machine is paid for, and at these tests the buyer is allowed to have as many representatives as he wishes. After such tests are made to the full satisfaction of experts, there is seldom any chance that the machines will go wrong or fall below guaranteed performance. It often pays to employ competent experts for the selection of machinery. Lastly, if the machine doesn't fulfill the guarantee, don't be afraid to ask the manufacturer to make good. Present day manufacturers are anxious to make good, because they know that any case of poor or unsatisfactory performance means a "black eye" for the manufacturer.

Good Enough to Be a Farmer

BY EDGAR L. VINCENT

THE way I looked at it, if my boy was smart enough to take a good place in a factory, he was good enough to make a first-class farmer, and I'm going to make it worth his while to stay right here."

The twinkle in the man's eyes as he said this was proof enough that he meant what he said. His heart was in the idea of keeping his boy on the farm with him. It did not take much urging to bring out the whole story, and it is very much worth while.

"You see, Ben has always had a streak of the inventor about him. He comes naturally enough by it, I think. His mother's folks were all ingenious. One uncle could make anything out of wood or iron. And Ben takes after him. Always tinkering around with the tools. I made up my mind a good while ago that if the boys wanted to use tools and would really make something with them, I could afford to furnish the tools. You go up stairs there and you'll see the workbench and what tools we have bought, not all at once, but along from time to time. And the boys have never spoiled any of them. O, I don't mean they have never dulled any of them. You can't use tools and not nick them sometimes.

"So Ben kept working away until last he hit on something that was different from anything that had ever been seen. We did not really know whether it was enough better than what was already in use to make it worth while to have it patented; but the folks we took it to downtown said it was, and that they would help us get it patented. What was more, they said if he wanted to come into the shop they would give him a job at good pay and he might spend his time thinking out improvements to machines; and if he hit on anything that was really new, they would do what they proposed to do with the one he had already had thought out, and at the same time pay him a good salary."

Just then Ben came along on his way to the little workshop. "Hello, Ben!" the farmer sung out, and quick the answer came back, "Hello, Dad!" It was plainly to be seen that there was the best kind of thing existing between the two. They lived heart to heart with one another. The farmer watched Ben when he went out of sight, and then a big smile took up the thread of his story again.

Ben came home and told me what he said to him down there at the shop. I don't really think he wanted to make up with the offer. Great the boy, you see; but any boy would feel proud to have such a thing put before him, after all, and he just ought to have seen the twinkle in the boy's eyes when he was talking about it.



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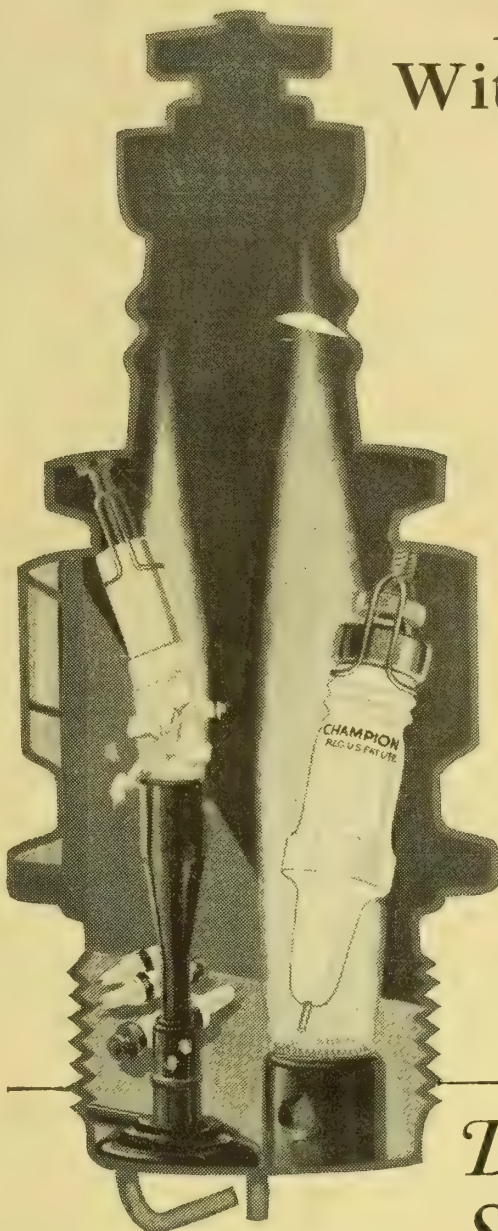
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"I believe I could make good, Dad," was what he said. "Don't you believe I could?" And I told him I knew he could, and then I asked him, with as little in my voice to show how it took me as I could, if he would like to try it. I never shall forget how he looked at me then. It was as if he would like to say, "Do you want me to go, Dad?" He stood there a minute waiting before he answered. Then he said, kind of low like, "If you think it is best, Dad, I'll go." Well, I just blurted out, "Ben I wouldn't have you go for all the world!" And that settled it.

"Settled some other things, too. I told Ben that if he felt satisfied to stay with mother and me, we would fix it so he would not miss it. He might work with his tools when he wanted to and if he thought out anything that appeared to be an im-

provement on any of the farm machines I would be the one to help him get the patent; he would not have to go to the folks down town. I don't see why that wouldn't be all right. I can do it, and still have my boy here with me. He is worth as much to me as he is to those men down there in the shop. If he strikes a good thing, and can make anything out of it, the money shall be his, just the same as if he was in a factory. I don't see why all the smart boys should have to leave the farm to make good. If they can make good anywhere, they can right here on the farm. And we are going to try it out in Ben's case."

In poor oils there may be found more or less of sediment, and sediment always means wear on the bearings.

Tell Him Now

If with pleasure you are viewing, any work a man is doing,
Do not withhold your approbation till the parson makes oration,
And he lies with snowy lilies o'er his brow;
For no matter how you shout it, he won't really care about it,
He won't know how many tear drops you have shed;
If you think some praise is due him,
Now's the time to slip it to him,
For he cannot read his tombstone when he's dead.

More than fame and more than money
Is the comment kind and sunny,
And the hearty, warm approval of a friend;
For it gives to life a savor, makes you richer, stronger, braver—
Gives you heart, and hope, and courage to the end.
If he earns your praise, bestow it,
If you like him, let him know it;
Let the word of true encouragement be said—
Do not wait till life is over and he's underneath the clover,
For he cannot read his tombstone when he's dead.—Unknown.

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FOR SALE—25-H. P. Rumely engine. Price \$500. Wm. Vandred, Mendota, Ill.

FOR SALE—Eight-roll McCormick shredder. Wm. Johns, Wilkenson, Ind.

FOR SALE OR TRADE—One 32x52 Advance separator, complete. Irvin Fessler, Jr., Triumph, Ill.

FOR SALE—Two well drills in good shape, good rope and tools. W. H. Eichholz, Syracuse, Mo.

FOR SALE OR TRADE—18-H. P. double Buffalo Pitts engine. Ralph Golden, Angola, Ind.

FOR SALE—20-H. P. Aultman & Taylor steam engine. H. W. Balgerman—West Bend, Ia.

FOR SALE—2A Western corn sheller, dogs all complete. A. W. Weaver, Kinross, Ia.

FOR SALE—30-60 Huber tractor, A-1 condition. Also eight-bottom plow, extra set shares. Box 77, Cedar Lake, Ind.

FOR SALE—One Case steam engine, 15-H. P.; new flues. Dallas Morris, Forrest, Ill.

FOR SALE—Titan 18-35 and Aultman & Taylor separator, 32x50, like new; cheap. Homer Thayer, Fairview, Kans.

FOR SALE—One P & O eight-bottom lever lift plow. Gunder Bondhus, Lake Wilson, Minn.

FOR SALE—Hart-Parr 30-60 tractor and plow. Also nearly new crank shaft. John Uffelmann, Steeleville, Ill.

USED FOR SALE—One 18-H. P. Gaar-Scott steam tractor, in good condition; now filling silos. Manley Hardware Co., Harvard, Ill.

FOR SALE—25-H. P. Minneapolis engine; a good sawmill engine; in first-class condition. C. Brewer, Dallas Center, Ia.

FOR SALE—20-H. P. Peerless, Case, Rumely, Advance, 22-Gaar-Scott, engines. All sizes Case separators. Two clover hullers. All good as new. C. A. Wiegner, Dognellson, Iowa.

FOR SALE—18-36 Avery, like new; four-bottom John Deere plow. Worth Lisher, Shelbyville, Ind.

FOR SALE—Garden City feeders and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Four Cushman engines at last year's prices. E. D. Richardson, Cawker City, Kans.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE OR TRADE—Avery separator, complete; 33x60, in first-class shape. Want 28 or 30 cylinder. What have you? Wm. Teal, Atlanta, Ind.

FOR SALE—Heineke self feeders (Ohio agency), 32-inch Garden City, 32-inch Ruth, 24-inch Ruth, good as new. A. C. Staffin, Sidney, Ohio.

FOR SALE—Same as new Advance eight-roll shredder, run about thirty days, in A-1 shape. Bargain if taken at once. W. E. Talley, R. 2, Lees Summit, Mo.

FOR SALE—Bowsher feed mill No. 8, five-inch bagger elevator, first-class running order, at sacrifice price. Write B. A. Knopf, Kenyon, Minn.

FOR SALE—Aultman & Taylor 23x36 separator, fully equipped; good as new; run two short seasons. \$850. Sidney P. Cook, Victoria, Ill.

FOR SALE—19-H. P. Port Huron engine; size 4 Aultman & Taylor clover huller; 36x60 Advance separator. Fred Haszler, Tonica, Ill.

FOR SALE—30-60 OilPull tractor, used about sixty days for belt work only. Too large for my use. Will sell cheap. J. H. Tophinke, R. 6, Bowling Green, Mo.

FOR SALE—One No. 5 Matchless Aultman-Taylor clover huller, used only one season. A. C. Rockelman, Lakeview, Mich.

FOR SALE OR EXCHANGE—For a clover huller or a smaller shredder—a Port Huron ten-roll shredder. Andreas Loen, Howard, S. Dak.

FOR SALE—Complete La Plant house moving outfit; 20-40 International tractor, \$350. H. Herbert, Flandreau, S. Dak.

FOR SALE—16-H. P. Pitts engine, \$650; 20-H. P. Pitts engine, \$1800; 36x56 Advance separator, complete, \$600; eight-roll Appleton shredder, \$475. W. H. McFarland, Lodi, Wis.

FOR SALE—One twelve-roll Advance shredder, first-class shape. One eight-roll Advance shredder, new; shredded fifty-five acres. Brubaker & Buckingham, Prairie City, Ia.

FOR SALE—One 20-H. P. double Reeves; one 30-60 Rumely OilPull; one 8-16 Avery; one eight-roll McCormick shredder; one 40-60 steel Case; one 32x54 Red River Special. Wm. Seyb, Donnellson, Iowa.

FOR SALE—Wood Brothers 22-H. P. steam engine; 40x60 inch separator and steel Case water tank mounted on steel wagon. All in pretty good shape. Run five falls. Floyd White, South English, Iowa.

FOR SALE—12-25 Avery tractor, complete, including a three-bottom Moline plow. Price \$960. Outfit only used last season. K. Crosbie, 468 S. Greenwood Ave., Kankakee, Ill.

FOR SALE—One set of extension rims, 12x66, for Case 50- or 60-H. P. One No. 2 Case high elevator with weigher, run one season. Edw. Engelson, Thompson, Ia.

FOR SALE—One Russell No. 1 sawmill, 54-inch inserted tooth saw, three head blocks, dust blower and taper sawing device. A first-class mill. John L. Taylor, Farmingdale, Ill.

FOR SALE OR TRADE—One 10-20 Titan kerosene tractor; one 10-20 Case. Will accept some young horses on same. Prices right. Wm. Hansen Auto Co., Dixon, Ia.

FOR SALE—20-40 Case tractor; 32x54 Case separator, used five years; Ottawa C sheller, used three years. All in good condition, cheap at \$2500. Alvin Carlstrom, Gowrie, Ia.

FOR SALE—20-40 Case tractor; 32x54 steel separator; self feeder and wind stacker, wagon bagger and weigher, A-1 condition. Address Carl H. Borklund, 6339 Elizabeth St., Chicago, Ill.

FOR SALE—One Model C Bates Steel Mule, one Model D Bates Steel Mule, and one Auto-Fedan hay press with 8-horse engine. C. H. Runge, Millard, Nebr.

FOR SALE—One 8-16 Mogul tractor; one 12-25 Avery tractor; one four-bottom Grand Detour plow; one 12-25 one-speed Waterloo Boy tractor. C. A. Frank, Earlville, Ill.

FOR SALE—One Oliver No. 79 four-bottom engine gang plow, excellent condition; has plowed less than one hundred acres. Huber Bros., R. 8, Watertown, Wis.

FOR SALE—My Avery 36x60 separator in A-1 running order. Will sell cheap if taken soon. Reason for selling, too large for this locality. Bernard Jaynes, R. 2, Preston, Iowa.

FOR SALE—Six-roll Advance husker, used two seasons, in A-1 condition and well sheltered. Price \$400 f. o. b. Robinson, Kans. Jacob Binder, Robinson, Kans.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—New 1920 40-80 Avery No. 24706. Used very little; guaranteed same as new; in perfect condition. Going out of business. Price \$3000. Ira Willeford, Logan, Ia.

FOR SALE—One 20-inch Robinson attrition grinder, complete with counter shafts and belting. One twelve-roll Advance corn husker. Some good used steam engines and threshers at bargain prices. Schmidt-Albrecht Co., Watertown, Wis.

FOR SALE—Five-bottom independent beam self-lift plow. Moldboards little rusty, otherwise in good shape. Am junking 20-35 Avery tractor. Parts suitable for repair will be sold cheap. Write your wants. Wm. C. Stevenson, Orion, Ill.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—One 40-65 Reeves tractor; one 36x60 Reeves separator; one 20-35 Emerson tractor; one 20-H. P. C. C. Reeves engine; one 18-36 Aultman & Taylor; one 28x46 International separator, brand new; one 32x54 Case steel. All in A-1 condition. H. A. Berns, L. B. 238, Chebanse, Ill.

FOR SALE—One 30-60 rebuilt International Mogul kerosene tractor. Kept in good shape and in excellent working condition. Extension rims, six-bottom Oliver plows. Price \$1200. Also one 16-H. P. Stover portable gas engine, first-class shape. Price \$250. Arcady Farm, Lake Forest, Ill.

FOR SALE—12-roll Advance husker three years old; always sheltered; excellent condition. Price \$345 f. o. b. Oak Harbor, Ohio. Will guarantee or pay one-half your expenses to look at it. The Arbuckle-Ryan Co., Toledo, Ohio.

FOR SALE—Minneapolis all purpose three-plow farm tractor, almost new. Model AA 12-20 Emerson tractor and three-bottom Emerson plow, new this spring. Prices reasonable. Address K. S., care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—Two 20-H. P. double engines, Reeves, and Nichols & Shepard, practically new 36x56 Nichols & Shepard separator, blower, weigher and Garden City feeder. Ottawa C sheller, good condition. Sell separate. Benj. J. Schneider, Lowpoint, Ill.

FOR SALE—Four Frick steam traction engines, different sizes; several separators, various makes; bean thresher, ensilage cutter, practically new; Farquhar saw mill. Everything in working order and prices right. H. P. Kellogg, Nunda, N. Y.

FOR SALE—One 16-21-H. P. Northwest Thresher steam tractor. Also one Avery 20-35-H. P. gasoline tractor. Bargains for a man having use for same. Machines can be seen at Rhinelander, Wis. Inquire of A. W. Brown, Rhinelander, Wis.

FOR SALE—One Parrett tractor; 8-16 Mogul; Huber; 12-20 Heider; Wallace Cub; three-bottom Rock Island plow; Case three-bottom plow; 20-H. P. Avery steam engine; 36x60 Avery separator. Can make you a very attractive price on any of the above machines, which are all in first-class shape. Indiana Parrett Tractor Co., Indianapolis, Ind.

FOR SALE—20-H. P. double cylinder rear mounted Nichols & Shepard engine; excellent condition. 18-H. P. Huber engine. 16-H. P. Nichols & Shepard engine. 36x56 Aultman & Taylor separator. 22x36 Avery separator, almost new. 12-25 Keck Gonnerman tractor in good shape. 12-25 Parrett, rebuilt and painted. Two 10-20 Moguls, cheap. W. G. Rush, 218 N. Sterling St., Streator, Ill.

FOR SALE—One 33x52 Gaar-Scott, one 32x56 Minneapolis, one 33x56 Baker, one 28x48 Avery and one 33x56 Robinson Money Maker, separators. All fully equipped. Also one 20-H. P. double cylinder Rumely and one 16-H. P. Huber, engines. Also one eight-roll Maytag, one eight-roll McCormick, and one six-roll McCormick, huskers. All in good condition. The Dafler-Moser Co., Richmond, Ind.

FOR SALE OR TRADE—One 40-H. P. Advance cross compound; one 26-H. P. Advance tandem compound; one 20-H. P. Advance simple; one 16-H. P. Advance simple; one 30-H. P. Avery undermounted; one 20-H. P. Avery undermounted; one 25 top mounted straight flue Avery; one 25-H. P. double Nichols & Shepard Canadian Special; one 16-H. P. Rumely double simple; one Russell 30-H. P. portable boiler and engine; one five-ton Avery truck; two three-ton Avery trucks; one 20-H. P. Gaar-Scott. Also new and secondhand Avery tractors and separators, all sizes. All machinery is in A-1 condition and ready for use. Subject to examination and trial. Prices are right for cash. Write for a complete description if really interested. Frank L. Brown, Coffeyville, Kans.

FOR SALE OR TRADE—36x60 Avery, rebuilt. 18-H. P. double cylinder Buffalo Pitts, rebuilt. One 36x58 steel Case, rebuilt. 36x58 steel Case. 36x58 wood Case. 44x62 Minneapolis. 36x58 Red River Special. 32x52 Aultman & Taylor. 18-H. P. Minneapolis return flue. 22-H. P. Avery return flue. 18- and 16-H. P. Gaar-Scott. 13-H. P. Russell. 18-H. P. Nichols & Shepard. 20-H. P. Case. 15-H. P. Case compound. 12-24 Russell tractor, nearly new. 30x60 Russell tractor, one year old. 2A Western sheller. Ottawa C sheller. Big 6 Birdsell huller. Horse power hay press. 36-inch Garden City feeder. Practical oil pump. Write for list and prices. Now is the time to get ready for next year. My rebuilt machinery is different, it's guaranteed. I rebuild on special order to suit you and save you money. Frank Nelson, North Henderson, Ill.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8500, half cash, balance long time. Object for selling have larger tract which desire to improve. B. B. Clarke, Madison, Wis.

FOR SALE—Avery two-ton motor truck, \$400; 20-H. P. Avery steam engine, \$500; 12-25 Avery kerosene tractor, \$475; Deere three-bottom plow, nearly new, \$150; Case 40x60 wood frame separator, \$200; one new, never uncrated, Lalley farm electric light plant, \$450; 18-36 Avery four-cylinder kerosene tractor, \$1450; four-bottom Grand Detour plow, slightly used, \$200. All above machinery in good condition and priced to sell at once. Silas Quick, Piper City, Ill.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5000 or more cash, balance as long as desired, six per cent interest. The pasture alone with timber on the tract would pay for it in a few years. B. B. Clarke (Old Sile), Madison, Wis.

MISCELLANEOUS

BARGAIN—Good eight-roll McCormick shredder. Box 178, Centerville, Ind.

TO SELL machinery or other property, write C. C. Shepard, Minneapolis.

WANTED—A Chandler & Taylor Mule sawmill. David Moser, L. B. 443, Lake Charles, La.

WANTED—Small grain separator, silo filler and corn husker. Colby & Spittler Co., Hart, Mich.

WANTED—25-50 or 30-60 oil tractor. No junk. Cash. F. W. Elmore, Jamestown, Mo.

REBUILT SAWMILL, cider press, boilers, steam and gas engines. Roberts Machine Co., East Palestine, Ohio.

WANTED—Secondhand separator, 22 or 24-inch cylinder. Give price. James Brunkan, Dyersville, Iowa.

WANTED—Kerosene tractor and separator. State condition, size, price. J. W. Dearlove, Glen View, Ill.

WANTED—Used 10-20-H. P. Titan or some other three-plow kerosene tractor. Give full description and price. H. Rudolf Nelson, R. 1, Parkers Prairie, Minn.

WANTED—Cheap secondhand sawmill. Curtis preferred. Don't care if wooden frame is rotten. W. H. Eichholz, Syracuse, Mo.

TRACTORS for shelling corn, etc., from \$250 and up; Waterloo Boy, Parrett, Avery, I. H. C. Rystrom Implement Co., Stromsburg, Nebr.

CLOSING OUT—J. I. Case 36x54 fully equipped and 18-H. P. engine. 18-H. P. Peerless; 25 actual Titan, Type D. Parts for 16 Huber and 16 Star. J. N. Britz, Aurora, Ill.

GENUINE BARGAIN—One Lauson 50-H. P. four-cylinder kerosene engine, stationary; one Bauer attrition ball bearing 22-inch feed mill, belt, reverse drive, clutch, etc. Sell all or part. K. B. Halverson, Delavan, Wis.

BOILER TUBES—BOILER TUBES—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

WANTED—To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

FORGES AND DRILLS—Farm use sizes at bargain prices. Send for booklet. Harris Machinery Company, Minneapolis, Minn.

WANTED—To hear from party having threshing outfit or other kind of machinery for sale. Give particulars and price. John J. Black, 237th St., Chipewawa Falls, Wis.

WANTED—16-H. P. Case or Huber steam tractor in New York, Pennsylvania or Ohio. Give shop number. Must be cheap. Frank Willson, R. 15, Fredonia, N. Y.

WANTED—Two-wheel self-steering tender, Case preferred. Also 36- or 40-inch Wood Bros., Aultman-Taylor, Avery or Rumely steel separator, fully equipped. V. H. Anderson, Roy, New Mexico.

CORDWOOD SAWS—Cordwood saws—30-inch guaranteed saw only \$8.40; 26-inch, \$6.40; 28-inch, \$7.40. Other sizes. Harris Machinery Company, Minneapolis, Minn.

WE SPLICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebore cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

WANTED—18-H. P. Nichols & Shepard engine, any condition, but boiler must be good; 32-inch steel Case separator; 20x36 separator; head, tank and cross head pump for 16- or 18-H. P. Gaar-Scott; 36x56 Aultman & Taylor separator. Frank Nelson, North Henderson, Ill.

OVERSTOCKED on brand new and slightly used 14-28 Avery tractors; \$1000 to \$1400. 12-25 Avery, brand new September 15, 1919, used one week, good as new, \$650. New Grand Detour and Oliver three-bottom self lift plows. While they last, \$150. T. W. Maxwell, Shenandoah, Ia.

SILLO FILLERS AND SHREDDERS
FOR SALE—One Rosenthal Big 16 silo filler, used one season; one Appleton filler in splendid condition. Price \$200. One Ross cylinder cut equipped with thirty-foot pipe. Price \$150. One Rosenthal Big Eight shredder, used one season; one eight-roll McCormick shredder, in good running order. Price \$450. One factory rebuilt Big Four shredder, good as new. Write Henry A. Hellmich, Greensburg, Ind.

An Untimely Call

A pawnbroker in a small town was awakened in the middle of the night by a furious knocking at his shop door. He opened his window and looked out.

"Wh-w-what's the matter?" he asked breathlessly.

"Come down," demanded the stranger.

"Who are——"

"Come down!" interrupted the other.

The pawnbroker hastened downstairs and peeped around the door. "Now, sir," he demanded.

"I wan'sh to know the time!" said the bibulous one.

"You blinking idiot. Do you mean to say you woke me up for that? How dare you?"

The midnight visitor looked injured.

"Well, you've got my watch," he explained.—*Pittsburgh Chronicle-Telegraph.*

Snow Wonder

A man was skiing along a New England road when he noticed a fairly good hat out on the snow. He reached out with his stick and gave it a sharp cut, and was dumfounded to hear a voice from under the hat exclaim:

"Hey, there! What the heck are you trying to do?"

Then he made the alarming discovery that the owner was up to his ears in snow.

"Great heavens," he exclaimed, "is the drift that deep over there?"

"Deep," answered the victim, "why man alive I'm standing on a load of coal."

USED STEAM ENGINES

We have at Port Huron the following engines which have been rebuilt. The most of these engines are very recent in design, and practically as good as new for service.

32-H. P. Port Huron Compound Traction Engine.

26-H. P. Buffalo Pitts Double Cylinder Traction Engine.

24-H. P. Port Huron Traction Engine.

20-H. P. Nichols & Shepard Double Cylinder Traction Engine.

20-H. P. Advance-Rumely Simple Engine.

20-H. P. Port Huron Simple Traction Engine.

18-H. P. Port Huron Simple Traction Engine.

18-H. P. Advance Compound Traction Engine.

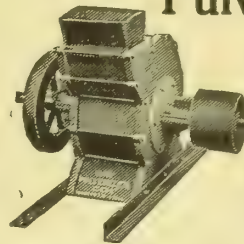
We also have a number of engines in first-class condition ranging in size from 9 to 16-H. P.

We are making a special price on these engines for the next sixty days.

Write us for complete description and price.

PORT HURON ENGINE AND THRESHER COMPANY
Port Huron, Michigan

Limestone Pulverizers



More capacity
Less power
Cost less
Last longer
Than others

Lime your land—make money—lime your neighbor's land. We have the right system.

Day Pulverizer Co. Knoxville, Tenn.

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest References. Prompt Service. Reasonable Terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.



INSYDE TYRES

Inner Armor for auto tires. Prevent blowouts and punctures. Double tire mileage. Easily applied to any tire between casing and tube. Details free. Agents wanted. Liberal profits. Amer. Accessories Co. Dept. X-3 Cincinnati, O.



THE LADS THAT MADE GOOD

these tires, which are now PERFECT in each and every way.

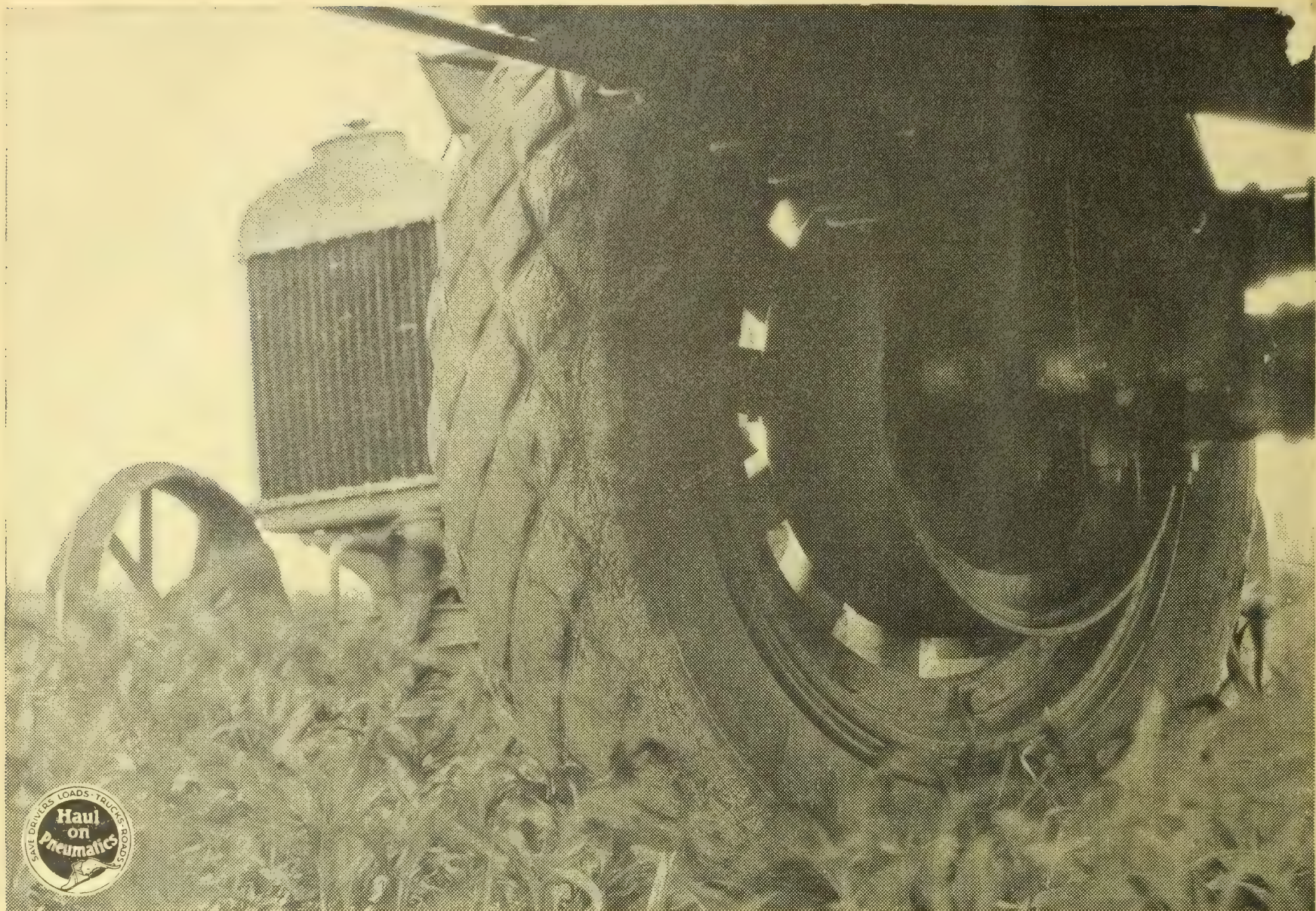
In order to avoid irresponsible requests for shipments, a deposit of \$1.00 will be required with each tire ordered, balance C. O. D., subject to your examination and approval.

These tires can be guaranteed for 3,000 mile basis. If you do not derive the above mileage, we shall make an adjustment suitable to your entire satisfaction.

Size	Tire	Tubes	Size	Tire	Tubes
30x3	\$7.00	\$2.25	33x4 1/2	\$14.75	\$4.00
30x3 1/2	8.75	2.50	34x4 1/2	15.25	4.25
32x3 1/2	9.50	2.75	35x4 1/2	16.00	4.50
31x4	11.00	3.25	36x4 1/2	16.50	4.50
32x4	12.00	3.50	35x5	17.00	4.75
33x4	13.25	3.75	37x5	17.25	4.75
34x4	14.50	4.00	36x5 1/2	24.00	

State whether straight side or clincher, plain or non-skid is desired. A special discount of 5% is allowed when full amount accompanies order. ORDER NOW. When ordering, please mention The American Thresherman and Farm Power.

1804 Wabash Ave. **S. & L. TIRE COMPANY** 3332 Olive St.
Chicago, Ill. St. Louis, Mo.



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"Soon after I got my truck I made a big improvement by changing quickly to Goodyear Cord Tires. The pneumatics save time, fuel, repairs and shrinkage in livestock—they have increased my hauling radius by 35 miles and go anywhere on the farm. I figure the one truck equal to six teams on my place. Motorization offsets the labor shortage and pneumatics help the farmer to motorize properly."—Frank B. Williams, General Farmer, Cedar Bluffs, Nebraska

MANY a resourceful farmer, like this one, now saves labor, time and money by doing his farm hauling and market hauling on Goodyear Cord Tires.

He hauls steadily through plowed fields, barnyard mud, sand trails and melting snow because these tractive pneumatics grip firmly as they go.

He hauls eggs, fresh vegetables, delicate fruit and shrinkable livestock with utmost safety because these are cushioned properly on the big Goodyear Cord Tires.

He hauls quickly to pumping, grinding, shelling,

harvesting and wood-cutting machinery because of the easy-rolling qualities of these helpful pneumatics.

Developed with the manufacturing care that protects our good name, the hardy strength of their Goodyear construction is repeatedly expressed in mileages of exceptional length.

Detailed information, concerning pneumatic-tired farm trucks and general farm motorization, will be sent you promptly on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR

CORD TIRES

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MT
Farm Mechanics

The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON WIS.

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November 1920 Yearly Subscription Price One Dollar **Vol. 23 No. 7**

5-P.M.L.



Using the tractor for feed cutting
GOODYEAR KLINGTITE FARM BELTS
Need no breaking in

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Feed Grinding Power—and Goodyear Belts

Fletcher Gollmer is well known in the neighborhood of Warren, Illinois, for his successful methods of raising and fattening hogs and cattle on his 110-acre farm. He has farmed all his life, and as a specialist on diversified stock for the last seven years has given close attention to the value of good, ground feed.

He grinds a lot of corn about this time every year, just as other stock farmers do. Twenty cows and sixty hogs, fattening in a batch for market, require the grinding of fifty to seventy-five bushels of corn at a time, and justify investment in the best of grinding equipment. In this work, Mr. Gollmer puts full reliance on the transmission ability of the belt he uses between tractor and grinder.

His Goodyear Klingtite Belt demonstrates its inbuilt strength by the delivery of an even, full flow of power on the grinder drive, a duty recognized generally by experienced farmers as perhaps the severest test to which a farm belt is put. Its smoothly powerful action produces uniformly ground feed and at the same time protects engine and grinder from undue strain.

This belt needs no breaking in. From the first, it holds the pulleys in a friction-surface grip that prevents

slippage, insures uninterrupted transmission of power, and enables the belt to be run loosely, with consequent advantage to the engine bearings. It requires no belt dressing.

Proof against cold and damp, Goodyear Klingtite Belts do not shrink or stretch. Therefore, there is no time lost in engine resetting. Unstitched and of bonded-ply construction, they do not separate at the plies, but wear evenly and last much longer than other belts do. In every respect of operation and maintenance, they are economical, efficient and trouble free. Farmers who know the Goodyear Klingtite Belt say it is the best help on the farm.

We build these belts specifically for farm duty. They are carefully designed to the service required of them, and specially constructed to protect our good name. They come in endless types for threshing and in suitable lengths for all other purposes. Their important function in modern farm power operation is discussed interestingly in the Goodyear Farm Encyclopedia. Write for a copy to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR

KLINGTITE BELTS

HOLT PEORIA-STOCKTON *Snow Removal with* **CATERPILLAR** REG. U.S. PAT. OFF. **TRACTORS**



"Caterpillar" Tractors were selected for snow removal work by the New York City Engineers because of their endurance, power and traction. This winter, in the congested business districts of lower Manhattan, the *traffic will be kept open* and fire danger prevented from ice and snow covered streets.

Only the "Caterpillar" can meet the severe task of getting to work when the storm commences,

cleaning the snow faster than it falls, bucking deep drifts, ice and sleet, *day and night*, as long as the storm lasts.

**New York
City
Purchased
50
"Caterpillar"
Tractors**

Street Cleaning Departments, Township, County and State Highway Officials, Public Utilities and Industrial Plants can depend on the "Caterpillar" for snow removal. It solves this problem as thoroughly as it does in road building, lumber-

ing, agricultural and industrial service. Write for Bulletin on "Snow Removal."

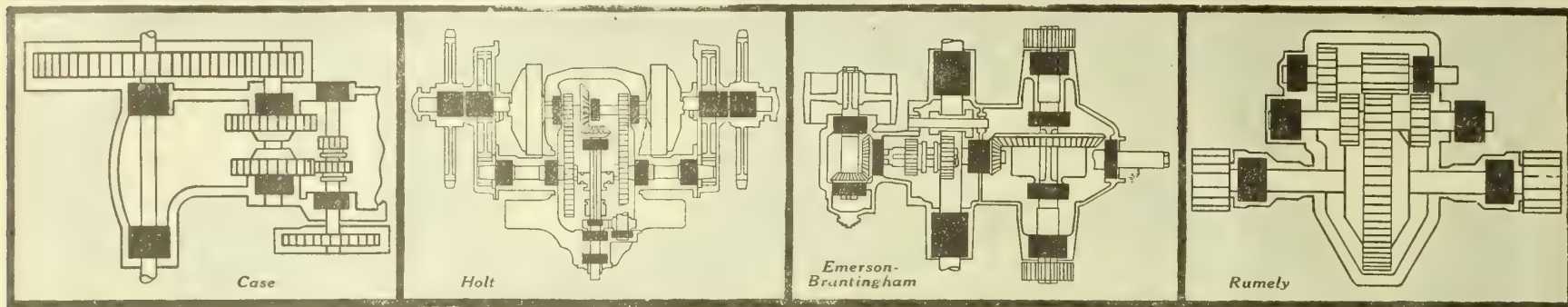
The HOLT Manufacturing Company
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Peoria, Illinois

Spokane, Wash. New York Office, 50 Church St.
 Factories at Stockton, Calif., and Peoria, Illinois

There is but one

CATERPILLAR

— HOLT builds it.



The illustrations show the transmission construction of several leading makes of tractors together with the location and number of Hyatt Bearings in these transmissions. Complete specifications of all tractor transmissions will be furnished on request.

“Case, Holt, Emerson-Brantingham, Rumely, Moline, Twin City, Waterloo and Lauson—these and other pioneers and leaders in the tractor industry have put Hyatt Bearings to the proof of performance.

“And from the beginning, year after year of use has merely added proof after proof of the value of Hyatt Bearings in farm tractors.

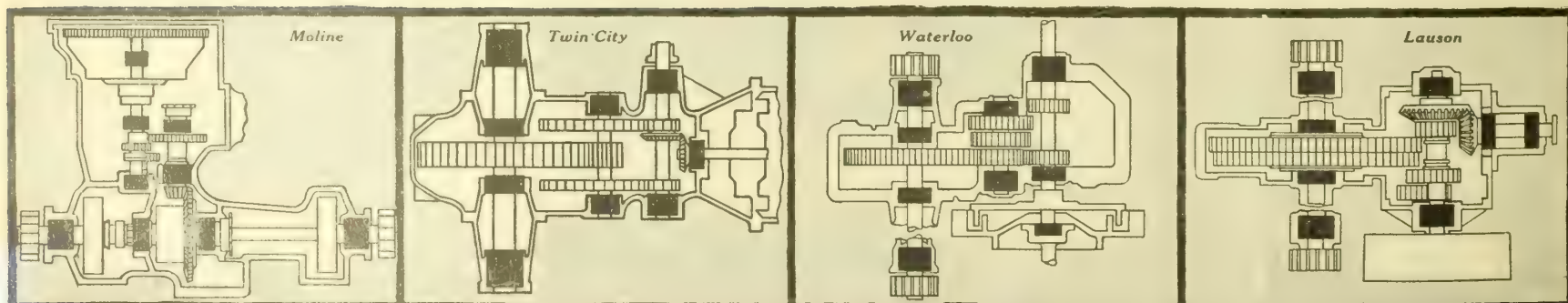
“The proof of performance—that, after all, is the real proof of merit.”

HYATT ROLLER BEARING COMPANY

Tractor Bearings Division, Chicago

Motor Bearings Division, Detroit

Industrial Bearings Div., New York City



The AMERICAN THRESHERMAN AND FARM POWER



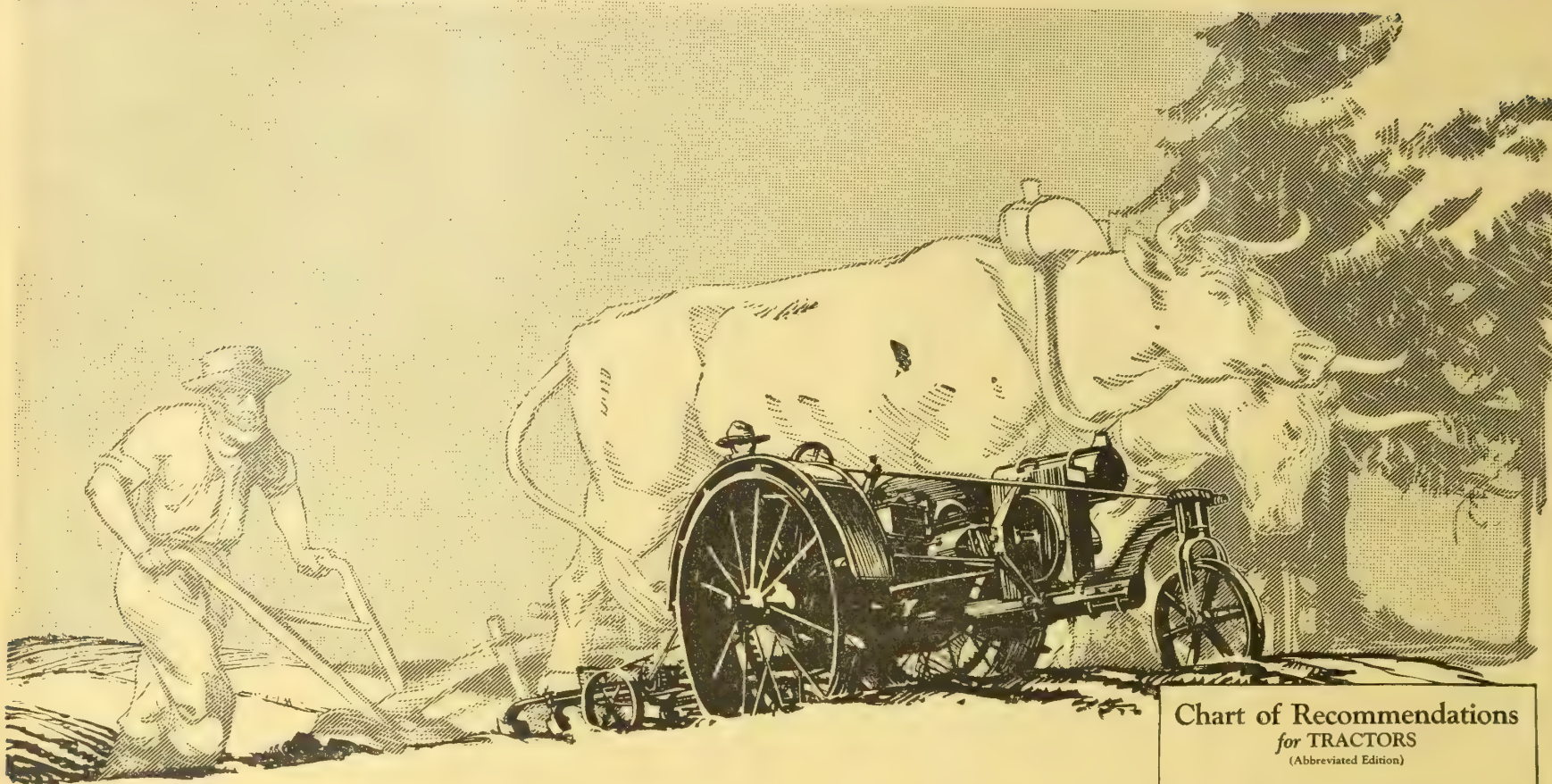
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The Farmer's Yearly Balance Sheet

National Interest demands that it show profits

IN 1830 ten hours of labor produced three bushels of grain. Today the same labor produces 60 bushels. The modern farmer more successfully combats insect blights, live stock diseases, soil conditions and in many cases even the elements.

This advance has been made at tremendous cost through research by the Department of Agriculture, Universities and other agencies supported by public funds because successful agriculture is vital to National prosperity. Only success can keep the best manhood on the farms.

In spite of improved methods, however, many farmers make only a "living" from their work. *In many cases criminal waste is the cause.* This waste is glaring in the case of farm machinery. Millions of dollars are lost yearly by farmers because machinery is not protected from the elements, and more important still, because it is inefficiently operated.

Prominent engineers agree that over 50% of all engine troubles on tractors, trucks and automobiles are due to incorrect lubrication. Incorrect lubrication not only means repair expense, but excessive oil and fuel consumption.

frequent shutdowns and quick depreciation.

The Vacuum Oil Company has for years been recognized the world over as an authority on scientific lubrication. Gargoyle Mobiloils when used as specified in our Chart of Recommendation, have in hundreds of public and private tests shown a saving of oil from 50 to 70% and a fuel economy from 17 to 25%. Besides lower operating costs Gargoyle Mobiloils enable you to get engine results, which means more power, less trouble, less depreciation.

Farmers fully alive to this situation have increased their profits to an appreciable extent by the economies effected with scientific lubrication.

The Chart of Recommendations (shown in part on this page) specify exactly what grade of Gargoyle Mobiloils will give you best engine results from your auto, truck and tractor.

* * *

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15-, 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.



Mobil oils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

Chart of Recommendations for TRACTORS

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"

B means Gargoyle Mobiloil "B"

Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

Tractor, 1920	1920	1919	1918	1917	1916
NAMES OF TRACTORS	Summer Winter	Summer Winter	Summer Winter	Summer Winter	Summer Winter
All-Chalmers General Purpose	A	A	A	A	A
" " All Other Models	B	B	B	B	B
Appleton	BB	BB	BB	BB	BB
Aultman-Taylor (18-36) . . .	B	B	B	B	B
" (122-45)	B	B	B	B	B
" " (15-30) (Waukesha Eng.)	BB	BB	BB	BB	BB
" " All Other Models . . .	B	B	B	B	B
Avery (5-10)	A	A	A	A	A
" Motor Cultivator & Planter	A	A	A	A	A
" " All Other Models . . .	B	B	B	B	B
Bates Steel Mule . . .	B	B	B	B	B
Bean-Truck-Full . . .	B	B	B	B	B
" " All Other Models . . .	B	B	B	B	B
Buckeye (Findlay, Ohio)	B	B	B	B	B
Case 10-18 . . .	B	B	B	B	B
" (10-20)	B	B	B	B	B
" (12 25 & 40-40)	B	B	B	B	B
" (15-27)	B	B	B	B	B
" " All Other Models . . .	BB	BB	BB	BB	BB
Cletrac	B	B	B	B	B
Cleveland	BB	BB	BB	BB	BB
Coleman	B	B	B	B	B
Common Sense . . .	B	B	B	B	B
C O D	B	B	B	B	B
Craig	BB	BB	BB	BB	BB
Creeping Grip . . .	B	B	B	B	B
E B (29-16)	B	B	B	B	B
" Reeves	B	B	B	B	B
" " All Other Models . . .	B	B	B	B	B
Fleur City (20-35)	B	B	B	B	B
" " All Other Models . . .	B	B	B	B	B
Fordson	B	B	B	B	B
Gas-Pul	BB	BB	BB	BB	BB
Granite	BB	BB	BB	BB	BB
Harp's Farm	B	B	B	B	B
Hart-Larr	B	B	B	B	B
Heider	BB	BB	BB	BB	BB
Hesson	B	B	B	B	B
Hinds	B	B	B	B	B
High Cater at M del N	BB	BB	BB	BB	BB
" Model 45)	B	B	B	B	B
" " All Other Models . . .	B	B	B	B	B
Hobbs	B	B	B	B	B
Holmes	B	B	B	B	B
Indiana	B	B	B	B	B
K C Francis Eng.	B	B	B	B	B
L A Co	B	B	B	B	B
Labor	B	B	B	B	B
Lighthouse	B	B	B	B	B
Manitowish	B	B	B	B	B
Minnepolis . . .	B	B	B	B	B
" " All Other Models . . .	B	B	B	B	B
Morse	BB	BB	BB	BB	BB
Saginaw	BB	BB	BB	BB	BB
Sixty	B	B	B	B	B
Texas	B	B	B	B	B
Union	B	B	B	B	B
Vermont	B	B	B	B	B
Wagon	B	B	B	B	B
Waukesha	B	B	B	B	B
Whitcomb	B	B	B	B	B
Washington	B	B	B	B	B
West	B	B	B	B	B
Winchester	B	B	B	B	B
Yale	B	B	B	B	B
Zenith	B	B	B	B	B

DOMESTIC
BRANCHES:

New York
Boston

Philadelphia
Pittsburgh

Detroit
Chicago

Minneapolis
Indianapolis

Kansas City, Kan.
Des Moines

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

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No. 7.

How I Made Threshing Pay

BY AN OLD CUSTOM MAN

SOME men fool themselves by saying, "I do custom threshing because I love to hear the hum of the separator." Others claim they like the dirt or the heat. I used to kid myself along these lines, but I don't any more. I know now why I'm a thresherman. It's because of the money I make out of it.

Strange as it sounds, I didn't always make money at it, and I've threshed a good many years, too. I bought my first rig over ten years ago, when cash was scarce, and when machines could be bought "on time." I was handy with machinery; I had worked one season as a separator boss. We needed some extra coin to pay on the place, and I thought one easy way to make some quick money was by getting some custom threshing.

My wife wasn't enthusiastic about the idea, but she has always been a good sport about letting me try things out. I lined up about eight jobs, bought a big 36x60 and got ready to make some of these profits that we'd been grumbling about. From having to pay out a big wad to the thresherman, after each harvest, we'd got the idea that the game was easy and full of money.

Before I had completed my outfit, including a separator, steam engine, water wagon, belting and incidentals, I had spent,—or else agreed to pay,—over four thousand dollars. My machinery, it seemed then, would last forever, so I went ahead bravely to get my share of the profits, without much thought of immediate expenses.

I'll not bore you with all the details of how my first years went. I got plenty of jobs, I did good work and I kept my machines in good repair. I seemed to make money, for I took in a lot. But I felt that I earned all I made. For weeks, sometimes, before harvest time, I'd neglect my farm work to get my equipment in shape, to run to town for parts or to go around lining up my prospective customers. Telephones were not universal, in our section, and it sometimes took a half-day to convince a man that I could get around to his job on time.

After threshing season, I'd be worn out. From trying to keep both my own hired help and my customers moving at top speed, combined with the work on the thresher (I was separator boss) I could hardly keep going after about thirty consecutive days of "runs."

One fall, about five years ago, when I had finished my last job and pulled the machine home, I felt mighty sick of the whole game. We had scraped together enough money, each autumn, to keep up payments on our place, and

we had been sending the kids to school, but beyond that we didn't have a thing to show for five years of hard work.

Worse than that, I had a sneaking idea that, without our farm crops, I'd have been losing money for the past five years. Tired of the whole thing, I dropped my wrenches in the dust, finished up a few chores and went into the house.

My wife was busy with the milk. She looked at me inquiringly. I hardly ever came in so early at that season of the year.

I threw myself wearily in a chair. "Hon, I'm goin' to quit this game," I told her. "I can't see

wife almost had me believing I'd make more money by hiring a car and riding around superintending my threshing gang than I would by working as separator boss.

To begin with, my wife showed me that all the time I spent in getting customers, arranging my run, collecting my money and going after repair parts, should be charged to threshing costs. I had, of course, known how much oil I bought, my labor costs, what my repair bills were, and many other single items; but I had never started, at the time I began to work on my machine, to charge every item to threshing.

The more we talked about it, the more eagerly I wanted to try threshing on a different system. I got a notebook, to keep handy. The first time I went out to work on the machine, one late winter day when the weather was getting mild, I kept track of how much time I spent on the machine. When I finished, I wrote in my book:

March 17—One-half day's labor . . . \$2.00

The next time I went to town to buy some paint and brushes to use on the engine, and some minor parts for the machine, I kept track of what I spent. When I came back, I wrote down:

March 27—Paint, etc. . . . \$4.50
Separator parts 3.75
Half day, man and team 2.50

Total 10.75

So it went. The total amount wasn't very much, during the spring months. But it was enough to be worth keeping track of.

Then I began to visit my old customers, or new men in the neighborhood. Most of them had telephones, but I had to make a few trips. I argued fiercely with my wife about charging these visits to expense, but she held out firmly.

"Sure, they're expenses," Hon would say, "you don't think Jim Stowe, the grocer, would reduce prices by the amount required to sell canned goods to you, do you?" I had to admit that this was so; but I felt I was doing my customers a dirty trick when I charged those visits to selling expenses. However, after a day spent in making calls on threshing customers, I wrote down in my book:

May 29—One day's labor (selling expense)
man and team \$5.00

My wife had drilled an idea into me—that my time was worth not less than four dollars a day. At that time (over four years ago) it seemed like a stiff price to charge for calling on my neighbors. Of course, these old friends were not paying for my calls, but I felt as if they were, when I

THE thresherman and his wife will read in this article the confessions of a man who failed and later made good. This farmer wrote us of his experience and it seemed so unusual that we wrote for details. His article has been rewritten in the editorial rooms of this magazine. He requests that his name be withheld.

If any thresherman has undergone similar experiences and will give us sufficient facts, we will make an effort to present the story in a helpful way to our readers. —The Editors

that we're gettin' anywhere with doin' all this dog's work. I intend to sell my rig and let some other bird figure how to beat the game."

My good wife quit her work and came over by me. "Now you're all tired out, and you're discouraged. You think you're not getting enough money for your work."

"That's it," I replied doggedly. "We can't be sure we're makin' money, and since we can't, there's no use in our slavin' along this way."

My wife looked at me hopefully. "Well, why can't we be sure? Don't you think, if we are not making money, we should charge enough so your work does pay?"

I looked at her doubtfully. "Of course we should," I countered with some irritation, "but who is goin' to find out?"

"We are," said my wife briskly, as she reached for her little notebook in the cabinet. Now my wife was a school teacher, before she lost her sense of things and joined all my troubles, so when she talks that way, I always give her plenty of rope and let her go.

Well, we didn't finish it that night. We worked on my old bills and receipt-books a good many nights that winter. Before we got through, my

(Continued on page 35.)

Making the Most of the Woodlot

By J. CROW TAYLOR

THE operators of the heavier tractor engines have always been more or less extensively interested in the farm woodlots of the community because they furnish the raw material for local sawmill operations with the traction engine.

The general complaint of most progressive farmers interviewed in the matter of the farm woodlot is that the returns from selling off their timber prove so disappointing that they lose interest in the commercial side of it, and are somewhat backward about showing concern over the forest being depleted and the woodlot being a greater dependence in the future for our lumber supply. Because of this, because of the failure to realize as much for timber in the rough as they feel like they should in the past, there has been developed the idea of coöperative work to reduce woodlot timber to specific lumber items and market the manufactured product instead of the timber.

The U. S. Department of Agriculture, through the coöperation of the Forest Service has been encouraging this community idea and a recent bulletin is devoted to coöperative marketing of woodland products.

This is Farmers Bulletin 1100, of the U. S. Department of Agriculture. It is an interesting pamphlet, full of suggestive ideas, but some of them will need to be taken with a grain of salt.

For example it says on page fourteen, that this country has much to learn from such countries as France regarding the proper handling of woodlots and the development of permanent local industries in the wood-working line.

Now there is undoubtedly room for better coöperation among farmers in a community to realize on their products, but not much light is gained by comparing this country with France or any of the older countries because we do business in a different manner and on a different scale. In France the average farm is about five acres, so even in the matter of buying tractors and various farm implements it becomes a community proposition to get ground enough to justify the purchase and use of the implements. In this country, on the other hand, we have single farms which call for more than one tractor, and each farm has enough ground to justify the owning and operating of many implements and labor saving devices.

There is some of the same contrast in the matter of logging and wood working. We do things on a much bigger scale, use modern labor saving machines which call for greater production and a concentration of raw material in quantities. For this reason instead of having wood working shops and chair factories in each community where a large part of the work is done by hand, we get out the raw material either in the form of lumber or special dimension stock and ship it to a factory where there are automatic machines to work it up in enormous quantities and for less cost than it can be done in such institutions as are mentioned



American Saw Mills Operated by Avery, Hart-Parr, Titan and OilPull Tractors.

in France. The first point to keep in mind, however, about all this is that unusual interest is now being centered upon farm woodlots for timber. The present interest is due partly to the thinning down of our big forests, and partly to the wide use of tractors which is making more power available in each community for working up the timber in the woodlots into a salable product that will bring more returns than can be had from selling off the timber in log form.

The man with a tractor and a sawmilling outfit has before him today a somewhat different problem from a few years back. He is faced with an increased value in timber and an awakened desire on the part of individual farm lot owners for a larger share in the returns from their wood when it is worked up. This will call for some thinking and some conferences to decide what is best and

why. The old way was for a sawmill man to either buy timber outright at so much for a lot, so much a tree, or so much a thousand feet or to cut the timber up on shares when the owner of the timber required some lumber for his own use. The indications are that from now on the owner of the timber will manifest a stronger preference for sharing in the enterprise of working up and marketing the timber or at least will want in some manner to derive greater returns from it.

This will probably do two things to the portable sawmilling industry. It will lead to coöperative buying and installing of plants on the part of some, while others will want to make some arrangement with the man owning a mill and tractor by which they can help with the work and have some equitable division of the returns. Incidentally this will make the individual owner of tractors and sawmills put on his thinking cap for ways and means to satisfy everybody and at the same time get the returns he should for his investment and enterprise.

One good idea that suggests itself here, and one that is touched upon in the bulletin referred to, is that of making a variety of products instead of concentrating upon plain lumber. What is in mind specifically now is a variety of products that can be marketed aside from the lumber and timber products which may be disposed of advantageously for community needs. These include stock cut to specific dimensions and quite a long list of what the trade terms wood specialties, that is, the raw material for them. These lines give promise of better return than plain lumber if they are intelligently handled.

The first step is for the sawmill owner to visit or get in correspondence with some of the important wood working factories within marketing reach, find out what dimensions of special material they can use and the different kinds of timber available, and get an understanding as to grades and quantities of each required before undertaking the work.

It will be found that some of the items, especially those used in wagon and implement work, have been standardized

so that one may safely cut them and feel assurance of finding a market for them somewhere when they are ready even if they have not been sold before the work of cutting is undertaken.

When the items are special and not in standard dimensions some specific arrangements should be made for their disposal before cutting them. Otherwise there may be trouble about marketing.

Following this idea, one should seek to get a variety of things to manufacture so that the trees may be used up as thoroughly as practical even to the heavy slabs, thus reducing the item of waste. We will find eventually that it is through the utilizing of much material which once went to waste that we will be able to materially increase the returns from woodlot timber. An intelligent following of this idea by individual sawmill men really holds much promise for future returns.

Clears 18,000 Acres—A Record

Marinette County, Wisconsin, Sets a New Mark in Amount of Land Reclaimed in One Year

EIGHTEEN thousand acres of land cleared in one year by farmers all over the county, is the record of the Marinette County Wisconsin Land Clearing Association for 1920. If this eighteen thousand acres is planted to potatoes next year, and makes only the average yield for Marinette County, it will produce 2,340,000 bushels. If eight hundred bushels of potatoes are put in a car and thirty cars are taken in one train load, it will require one train a day from September 1 to Christmas next year to haul the potatoes from this newly cleared land. Let those figures soak in a minute and then let's all take off our hats to the men in Marinette County who accomplished their purpose this year, and who will start next season with this increased acreage of productive land.

Having done a large amount of educational work in the way of land clearing demonstration trains, publication of literature, and showing of moving pictures, up to 1919, the College of Agriculture of the University of Wisconsin—by its land clearing department—sought some practical application of this instruction. It wanted this practical application on a large scale.

Partly through overtures made by the College of Agriculture, partly through their own appreciation of the importance of such demonstration, leading agriculture and commercial interests of Marinette County in the fall of 1919 volunteered to make the practical application. The Marinette County Land Clearing association was formed with Superintendent W. E. Morton of the Stephenson Training and Agricultural School, Marinette, as its chairman. The initial meeting was held at Crivitz in January, a board of directors consisting of a representative from each town was elected and the campaign was launched.

Larry F. Livingston, formerly director of land clearing for the College of Agriculture, whose brother, Carl Livingston, since deceased, had started the land clearing movement in Wisconsin, was just then available. Mr. Livingston had recently returned from the service as a lieutenant in France. His services were secured as directing engineer of the Marinette County enterprise.

A survey showed that Marinette County is 905,000 acres in extent, with three hundred thousand acres in farms. Of this area, only seventy-three thousand acres were in clearing, including three thousand acres cleared in 1919.

It was determined there were three thousand farms in Marinette County and that if each farmer cleared three to ten acres, or an average of about six acres, it would mean eighteen thousand new cleared acres in the county in 1920. It was considered that a concerted effort would make

possible the clearing of eighteen thousand acres and that figure was fixed as the goal of the association.

Preaching "eighteen thousand acres in 1920," Livingston and various volunteer aides, including Alfred Mathewson, Wisconsin agricultural representative of the Dupont Powder Company, held scores of schoolhouse meetings in the county during the remaining winter months of 1920.

This will be done through educational meetings in every part of the county and by facilitating the buying and distribution of explosives and other land clearing material. The association will assist those who need it, to get financial help for clearing as the greatest aim of the organization is to place land clearing on a sound financial basis as a profitable business and a good banking risk."

Through coöperative buying—the association placing the orders—Marinette County placed in the spring of 1920 one order for seven carloads of dynamite, the largest single agricultural order of explosive ever filled. This dynamite was expended almost wholly before the 1920 planting season began. Much of the newly cleared land was in crops through the season just ended. The fall campaign began with the same enthusiasm at the close of the harvest and the association filled enough orders for dynamite, including twenty-six thousand pounds of TNT furnished by the state, to bring the total of farm explosive for 1920 in Marinette County up to fourteen carloads, or an actual total of 314,000 pounds.

"No institution in the world has done quite so much to simplify land clearing as the state of Wisconsin," says Alfred Mathewson. "For many years prior to 1915, hundreds of Wisconsin's cut-over acres had been cleared by some means or other. Much of this was done by grubbing, some with crude machinery, some with explosives, little known or understood by users, and, later, more modern machinery and explosives were employed with more or less efficiency. But it was not until 1916 that Wisconsin's College of Agriculture discovered the late Carl D. Livingston, whose name today stands foremost among all land clearing engineers. In the spring of 1916 Mr. Livingston began an organized effort to speed up the clearing of Wisconsin's ten or fifteen million acres of stump land, and in this local

achievement of clearing eighteen thousand acres in a year's time, we hear the echo of a voice that spoke four years ago."

"The primary object of our office," says L. F. Livingston, secretary of the Marinette County Land Clearing Association, "has been from the beginning to give the individual farmer and settler personal attention and instruction, and facilitate his applying these instructions for himself. It is of interest to many to note the actual saving in dollars and cents that our association has meant to the farmers of Marinette County. Considering dynamite alone, it is a conservative estimate to state that we have saved at least five cents a pound, or approximately fifteen thousand dollars on the dynamite distribution. This saving does



After.



During.



Before.

Blasting an Acre of Stumps at One Shot, Wausaukee, Wisconsin, October 12, 1920.

With this theoretical education, with this cumulative inspiration as a basis, Marinette County opened at Cedarville in the spring the first land clearing school ever held in the United States.

Equipped with all forms of modern land clearing devices and materials, the Marinette County Land Clearing association's school taught several hundred farmers how best to clear land. Students came from adjoining states and from states as remote as Texas and Louisiana.

With the closing of the school, land clearing began in earnest. The aid extended by the association is expressed in this quotation from a circular issued at the time:

"The purpose of the association is to promote, stimulate, systemize and thereby make easier the process of land development in Marinette County.

Why Farmers Want Trucks

An Iowa Plutocrat Speaks Up

BILL HILMER doesn't look like a plutocrat. When I first saw him, working under the separator with a pitchfork, I might have been pardoned for thinking he was a new hired hand. Every one else had a bundle wagon, or a tractor, or a bossing job, but Bill was hard at work doing the dirty jobs. That is why you'll be interested in what he told me.

"No doubt about it," muttered Bill, as he whacked the new reach into place while I held up a corner of the rack. "Every farmer around here is going to want a truck, just as every farmer worth while now owns a tractor."

"Perhaps they are, Bill, but why?" I persisted. Bill straightened up and pointed his hammer toward his house, a mile away across the rolling stubble-fields. He paused impressively. "You saw all those buildings?" I nodded. "And my machine shop?" I nodded again. "And those electric lights all around the place?" Once more I assented. Bill went back to hammering, as if it was all settled. "Well, that's why."

It may seem strange to you, but it made the matter clear to me. I knew right away why Bill was sure that eventually all farmers in his section would have trucks.

Bill has a real farm. He doesn't own just a farmhouse; he owns a village. Eighteen separate, distinct buildings are grouped in orderly fashion on the old homestead where Bill was raised. They have just been repainted, and their white-trimmed uniformity makes them pleasing to the eye. Woven-wire fences add to the clean appearance of the place.

The farm did not always look like this. When Hilmer's parents came to this country, he was a tow-headed youngster who couldn't speak English. He knew of the struggles they had to undergo and he can still remember when, thirty-two years ago, after much saving and scratching, his parents paid the astounding price of sixty-five dollars per acre for the quarter-section where Bill now lives.

There were no woven-wire fences, no electric lights, no eighteen fine buildings, no cement walks. Bill's father put up their first improvements with a saw and hammer, using an oil lantern for the many tasks that had to be done before dawn and after dusk. And Bill did these things, too. He would do them again, if he had to; but, as Bill philosophically remarks, "We don't have to." In Bill's boyhood, everything that was lifted, or dug, or carried, was handled by sheer man-power or horse-power. Bill can still remember clearly the day he got the first gasoline engine seen in his neighborhood. Some wells were to be dug, and Bill decided to lighten this back-breaking job by the use of the new power, then little understood. That purchase of a stationary engine marked the be-

ginning of his conversion to farm power methods. Up to that time, the most complicated machine he had ever owned was an old Osborne reaper.

Bill thinks 1916 was an epoch-making year in his section—and you must remember that Bill lives in what is the highest-priced farm-land section of Iowa or the Middle West—perhaps of the

The small "ring" outfit has become popular in Benton and Blackhawk Counties. It has lessened the number of farmers who must combine to form a crew. All grain (mostly oats) is threshed from the shock and, with machines so numerous, no waiting is necessary.

The small separator has done much to regulate the size of tractor used. Bill's first tractor was a

12-25, but he found it too small for his separator, so he sold it and bought an 18-36. Now he has ample draw-bar power for four plows, and all the belt-power needed for any farm work. He thinks it is the logical size for farming in his section. But I must add that Bill owns a two-row motor cultivator. "Wouldn't be without it," he said. This cultivator cost \$1,100 and has already (in one season) paid for itself, according to Bill's way of thinking. He cultivated thirty acres a day with it, using about ten gallons of fuel each day; five gallons less per day than his dealer estimated would be needed.

Now this may seem like a round-about way to tell you why farmers want trucks; but it is the way Bill told me. At one time the farmers of Benton County, Bill included, were content to dig wells by hand. Now not a mother's son will start to dig a well until the proper power aids are on hand. The same thing is true with corn cultivation, plowing, silo-filling, corn husking. As soon as the easier, faster methods are introduced, nobody wants to continue in the old way.

Bill lives eight miles from Laporte, Iowa, his nearest shipping point. For thirty-one long years the pleasure of getting the crops to market and cashing in on the year's business was considerably lessened by the fact that long, hard grinds on the roads, by men and horses, were the first steps toward marketing.

Over a year ago, Bill bought a big truck. It has a well-built body, eleven feet long, sixty-two inches wide. Equipped with pneumatic tires and an enclosed cab, it makes fast, comfortable riding of the trip which for over thirty years had been the bane of Bill's life.

The truck carries a real load, too. Bill usually sells his hogs when they weigh, on an average, something under four hundred pounds. Last year he marketed two hundred and forty hogs—about four carloads. With his truck, Bill could carry thir-

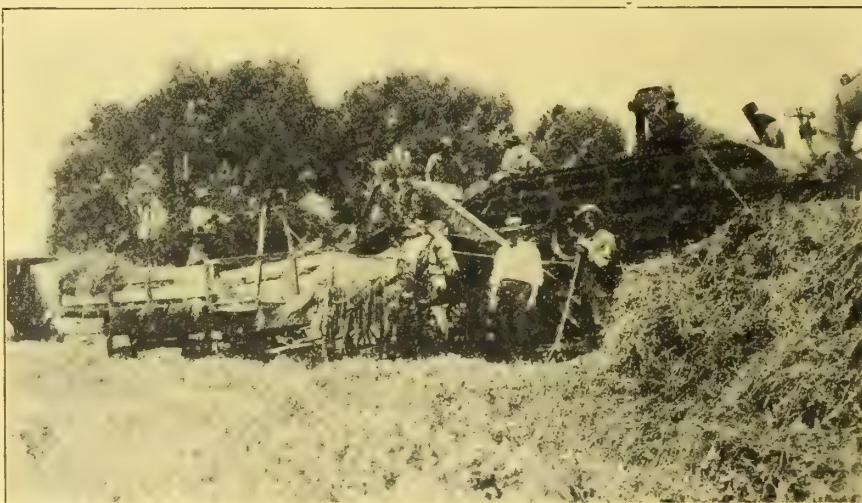
teen or fourteen hogs at a time. He could make five trips a day. At this rate, he could load a carload in one day, without a bit of outside help.

In the old days, two trips a day by each wagon meant an early start and a late finish. The wagon box could accommodate only four or five hogs. The shrinkage was considerable. Bill figures he has saved enough on hog shrinkage, up

(Continued on page 46.)



The Silo Is Like the Truck. It Is Built to Last.



Hilmer, with the Pitchfork, Is Found Where Work Is Plentiful. Chaney, in the White Shirt, Sold Him His Truck. Chaney Is Not Afraid of Farm Dirt, Either. That Is One Big Reason Why He Sells Many Trucks to Farmers.



Bill Hilmer Had a Real Farm So He Wanted a Real Truck.

whole United States. In 1916, Bill built his silo, a fine brick structure; he bought his tractor; he got additional power equipment for his shop. In this same year many neighboring farmers bought similar improvements. The small grain separator began to appear on many farms, due to the fact that the owners of these high-priced lands felt able to add this rather expensive machine to their growing lists of farm power aids.

Farming with English Tractors

By ARTHUR G. BLACKMUR

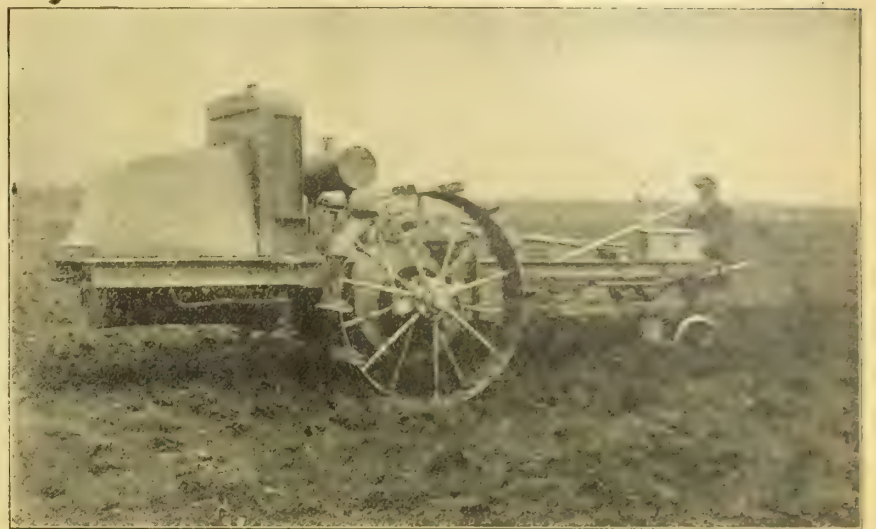
WHEN Captain Wright received his discharge in March, 1919, and returned to the Hermitage Farm, Haddenham, Herts, England, he had a big idea. While in the army he had been in the Motor Transport Corps, and had become imbued with the advantages of motor traction. His first step in carrying out this program of motorizing his farm was to try out various types of tractors. He did not buy at first but hired. Many builds and types were tried and at last he settled on a Crawley Agrimotor. This he bought in September, 1919, and since that time he has plowed five hundred acres. As the Crawley is principally a plowing machine, it was found that it did not help to solve his farm problem. He then invested in an Austin tractor built by the Austin Motor Company of Birmingham, and his was the twentieth out of the works. He found it possible to do both plowing, cultivating, and rolling and will use the Austin for hauling the reaper and binder. However, it is his intention to keep the Crawley principally for plowing work, and only use the Austin for plowing when there is no other work.

The Crawley is a self-contained motor plow. It is a two-wheeled affair. There is a small wheel at the back, and the operator sits at the back. Each wheel operates independently so that it is possible to turn around in a very small space, thus cutting down the head-lands. The tractor is equipped with a Buda engine, which was running very sweetly. It is possible to disconnect the plow part and put in a cultivator, or parts are supplied to turn it into a tractor suitable to haul a reaper and binder. When I got there the tractor was out plowing some stiff fen land and was getting away with it great.

Mr. Wright then had the man get the Austin out to show off her paces. He first put her out cultivating and had it pulling a spring tooth cultivator. The teeth were well set down yet the tractor was making practically no effort. Next he had the tractor out plowing. He had the Austin pull a two-furrow Cockshutt plow. Although the Austin is advertised as a three-furrow tractor, Mr. Wright does not think it advisable to load the

tractor to this extent in the heavy ground of his farm. He believes that it is advisable to give the tractor a lighter load and have less wear and tear on the engine. The Austin tractor has not done very much plowing so far, chiefly cultivating and rolling, so it is hardly fair to express an opinion on how it will stand up under the hardest of farm operations.

It is not Mr. Wright's idea to displace the horse. As a matter of fact, since using the two tractors he has only cut down the number of horses from twenty-two to eighteen, the number of men from seventeen men and four boys, to fifteen men and four boys. So it can readily be seen that the tractor has not cut down expenses to any great extent. Mr.



Captain Wright's English Tractor Suggests An Airplane.

the fact that with the tractor the work can be done so much quicker. This is a big factor in England, when it rains for a week at a stretch in the middle of the summer,—the taking advantage of fine weather. It would need far more than eighteen horses to get the work done in fine

weather if the tractors were not on the farm. So that there are many different points of view to look at the question of horse vs tractor work. Mr. Wright finds the horses best for pulling the drill, for hauling manure to the fields and grain to the thrasher or stack. He has not used his tractor for haulage work as the depot is practically on his farm. Of course, there is also the breeding of horses to be taken into consideration and much of the cost of keeping the horses can be counterbalanced by this factor. However, it costs four dollars a week to feed horses and four hundred dollars would be a fair price for a two-year-old so there doesn't seem to be much there.

Mr. Wright had three horse plows at work when I arrived at the farm, as well as the Crawley. The Austin was standing idle. Each horse plow had three horses pulling the plow and one man operating, which looked very much like a waste of nine horses and two men. It was not because he did not have another man to run the Austin, as a boy of fourteen who runs the Austin quite frequently was out with one of the plows. The field was a large one, probably at least forty acres and narrow, long and flat. It struck me quite forcibly that the tractor may never drive the horse entirely from the farm, but here was a place to drive at least nine of them. However, there may have been other factors to take into consideration, but I am from Missouri and they would have to show me.

Mr. Wright is principally a small grain and potato grower. He has one hundred and eighteen acres of wheat, one hundred and eighteen under oats, and forty-four acres under potatoes, beside several other fields of peas, mangolds, etc. It is his intention to buy a threshing outfit before long. His average yield is a trifle above five quarters to the acre (about twenty bushels). I am afraid that when it comes to figuring overhead for the threshing rig and the building to keep it in and



Tractors Are Replacing Oxen in Norfolk.

Wright figures that horse plowing costs seven dollars an acre and tractor plowing around four dollars. This is where he figures he saves. Personally I cannot see it. If you are going to keep practically the same number of horses and men, overhead expense must be reckoned in your

tractor operating costs, and it seems to me that tractor plowing would in this case cost practically as much or more than horse work. It seems to me that Mr. Wright has either too many horses and men or not enough tractors. The farm is one of six hundred and fifty with practically four hundred and fifty acres under plow.

However, Mr. Wright has one great argument in favor of the tractor which cannot be reckoned in dollars and cents. That is



An American Tractor In Hertfordshire.

(Continued on page 47.)

Missouri Shows the Way

Farmers Own Storage Silos in Common

By GEORGE S. TOMPKINS

A MISSOURI man made his state famous when he used the expression, "You will have to show me, I'm from Missouri."

Since that time, Missourians have taken pride in demanding proof of statements before they accepted them at face value.

If any salesman, two years ago, had told the farmers of Monroe City, Missouri, that a coöperative business with ten thousand dollars capital could handle gross sales exceeding one million dollars, saving all members of the company hundreds and thousands of dollars per year, there would have been a loud shout of "Show Me!"

Today, these Missourians have been shown. They have been swift in taking advantage of what they have learned. As a result, Monroe City today has an elevator capacity of fifty-three thousand bushels instead of only eleven thousand bushels. This Missouri community is prepared not only to tell but to *show* how a coöperative elevator pays big dividends.

Before we tell the history of this community enterprise, let us locate Monroe City for you. It is an ordinary place, with the ordinary annoying problems of transporting and marketing its crops. While only eighty miles by air-line from St. Louis, its closest large market, the railroads carry farm crops one hundred and thirty miles by rail to the metropolis. Hannibal, a fair-sized river city, is only twenty-two miles away; at present, it is not practicable to ship by motor truck the large grain crops grown around Monroe.

Two railroads serve this city: The Missouri, Kansas and Texas and the Chicago, Burlington and Quincy. The old elevator of Monroe, with eleven thousand bushels capacity, was alongside the Burlington track.

In 1918, the Monroe section did its share in winning the war by raising a bumper wheat crop. The elevator was inadequate, in the face of overworked freight lines. The farmers saw an uncertain future for grain raising in their section unless they had greater storage facilities.

Early in 1919, when stenographers began buying seal-skin coats and shipping clerks were stampeding to buy motor cars, these sturdy farmers had an orgy of spending, too. They incorporated the Farmers' Elevator and Exchange

Company with a capital of ten thousand dollars. This company organized to do coöperative livestock, feed and grain shipping.

During last harvest season, the company was restricted to the use of the eleven thousand bushel elevator. On one single day, seven thousand bushels of grain were received; their problem for 1919 was to get cars on the track, to receive the grain as it was brought in. This method of handling their marketing was unsatisfactory. The farmers were forced to ship while the market was glutted and demoralized. It was estimated by

the company officers that last year the farmers around Monroe lost two hundred thousand dollars by having to ship and sell at the market.

As we said before, these Missouri farmers had to be shown once—but only once. They determined to be prepared against car shortage and market manipulation.

After careful investigation, the Monroe farmers decided to enlarge the storing capacity of their elevator by means of silos.

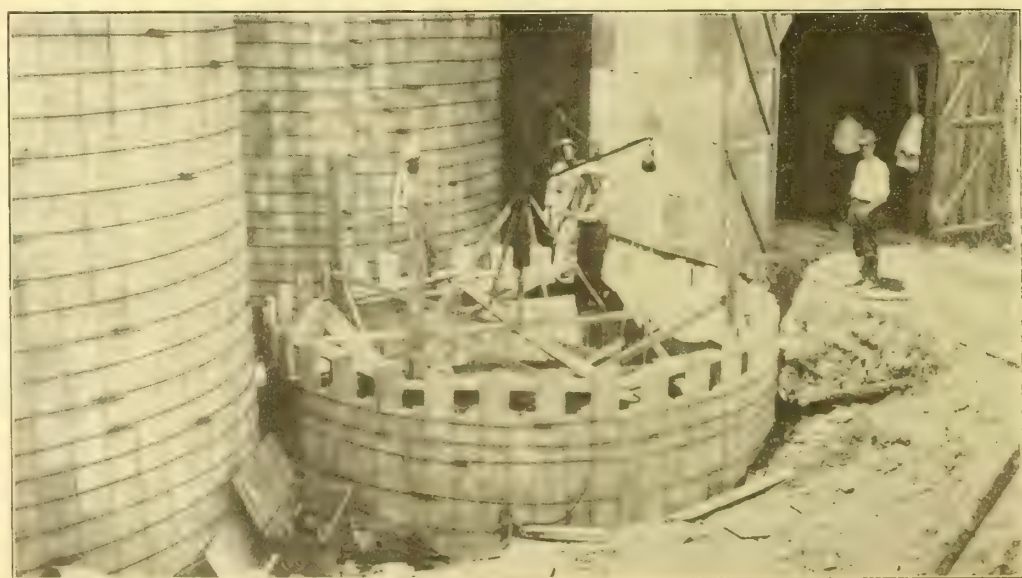
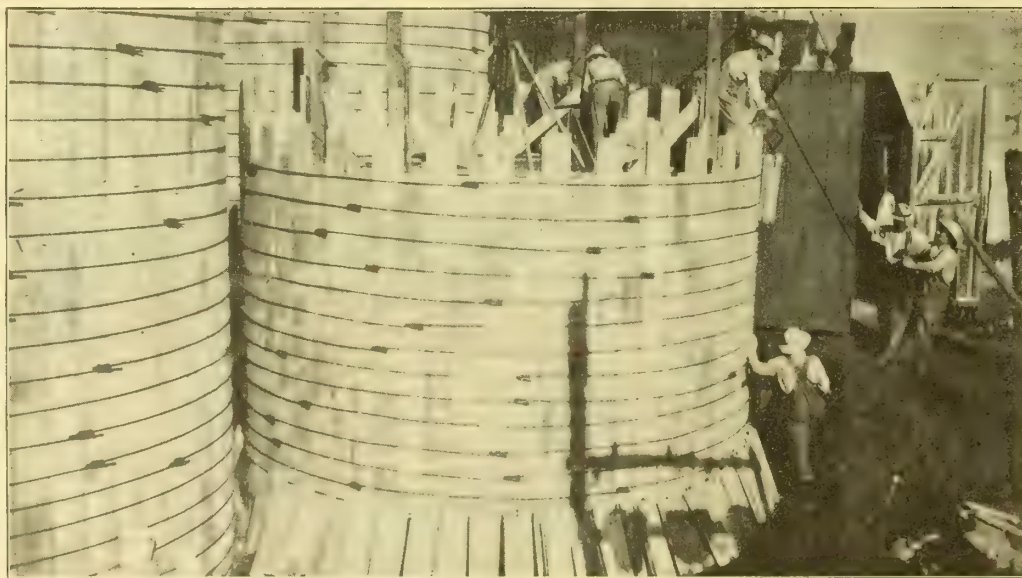
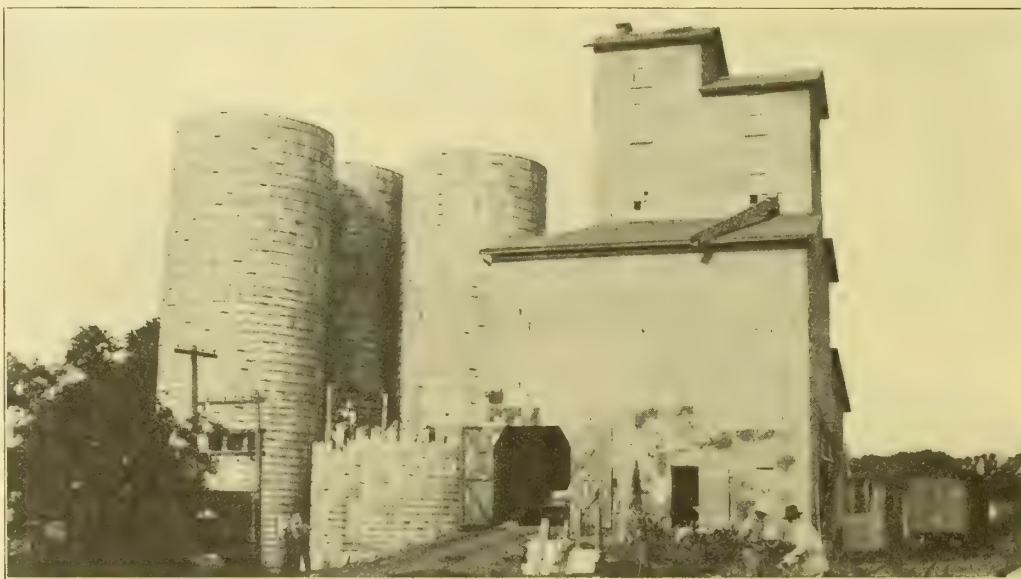
You are all familiar with barrel staves; but to many readers of this article, there may be some-

thing odd about concrete staves. Staves suggest wooden barrels. Yet concrete staves are the material of which the silos have been built. Alongside the elevator, three of these big silos were finished before threshing season began, and the fourth was ready before the grain from the stack threshing got to the elevator.

These silos are made of concrete staves cast with a tongue and groove to fit one within the other, with square shoulders on each end so there will be no side movement, and are held in place by an iron hoop. They have a capacity of ten thousand five hundred bushels each, giving the company a total storing room of fifty-three thousand bushels. In the event of the inevitable inability to procure cars or the desire of the farmer to hold his grain for better market conditions, he may store in these silos and accept a storage certificate which he can take to his banker. On his receipt he can borrow money with which to meet his demands.

This makes it unnecessary for him to sell because he needs the money. Should he store at home, granting he has the room, he would have to stand the risk of loss by rot and shrinkage; he would handle the grain at least twice and probably need his time and help elsewhere when it came time to move to a shipping point. When he stores in these silos, his grain is right on the railroad ready to ship (this fact alone making it worth five cents to ten cents more on the bushel), and at the opportune time he can order it put on the market.

The worry of loss by shrinkage and expense of rehandling is dispensed with, as grain is carried from the threshing machine direct to storage,



Note the Convenient Grouping of Elevator Silos and Railroad, and the Daily Growth of the Fourth Silo

(Continued on page 47.)

TEXACO MOTOR OIL



THUBAN COMPOUND

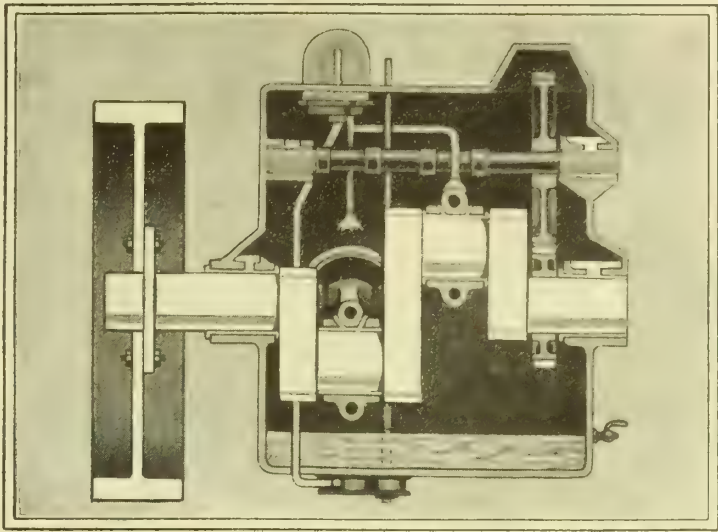


HARVESTER OIL



AXLE GREASE

Your Tractor floats on films of oil



HUNDREDS of pounds of metal in tractors float on thin films of oil. Thus oil must resist tremendous pressure. It must not be squeezed out. This film must not break down. It must keep those "saw-tooth" frictional surfaces apart. At the same time the oil must spread. It must be fluid enough to reach all the bearing surfaces. It must not be sluggish and for this reason a lighter, freer-flowing oil must frequently be used in winter as extreme cold has a tendency to thicken all oils. And it must be able to withstand the terrific heat produced by kerosene combustion, without excessive thinning down or carbon deposits.

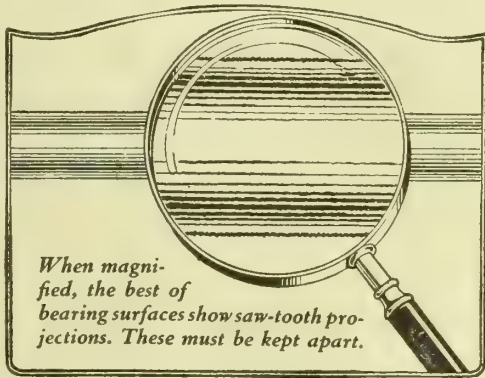
TEXACO TRACTOL is especially refined to meet these exacting conditions. For many years, in many climates and in all makes of tractors, it has been most severely tested

out and satisfactorily used. It has been found to increase power and add to the life of bearings.

Three Grades of Texaco Tractol

There are three grades of TEXACO TRACTOL—"B," "C," "D." Grade "B" for large engines in severe summer conditions. Grade "C" for large engines in winter. By "winter"—frost temperature (about 40° F.) is understood. For smaller engines use Grade "C" in summer, Grade "D" in winter. TEXACO TRACTOL is shipped in 55 and 33-gallon steel drums, wooden barrels and half-barrels, and five-gallon cans.

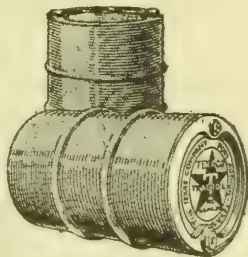
Try it—you'll see a difference right away—and later when you overhaul your tractor.



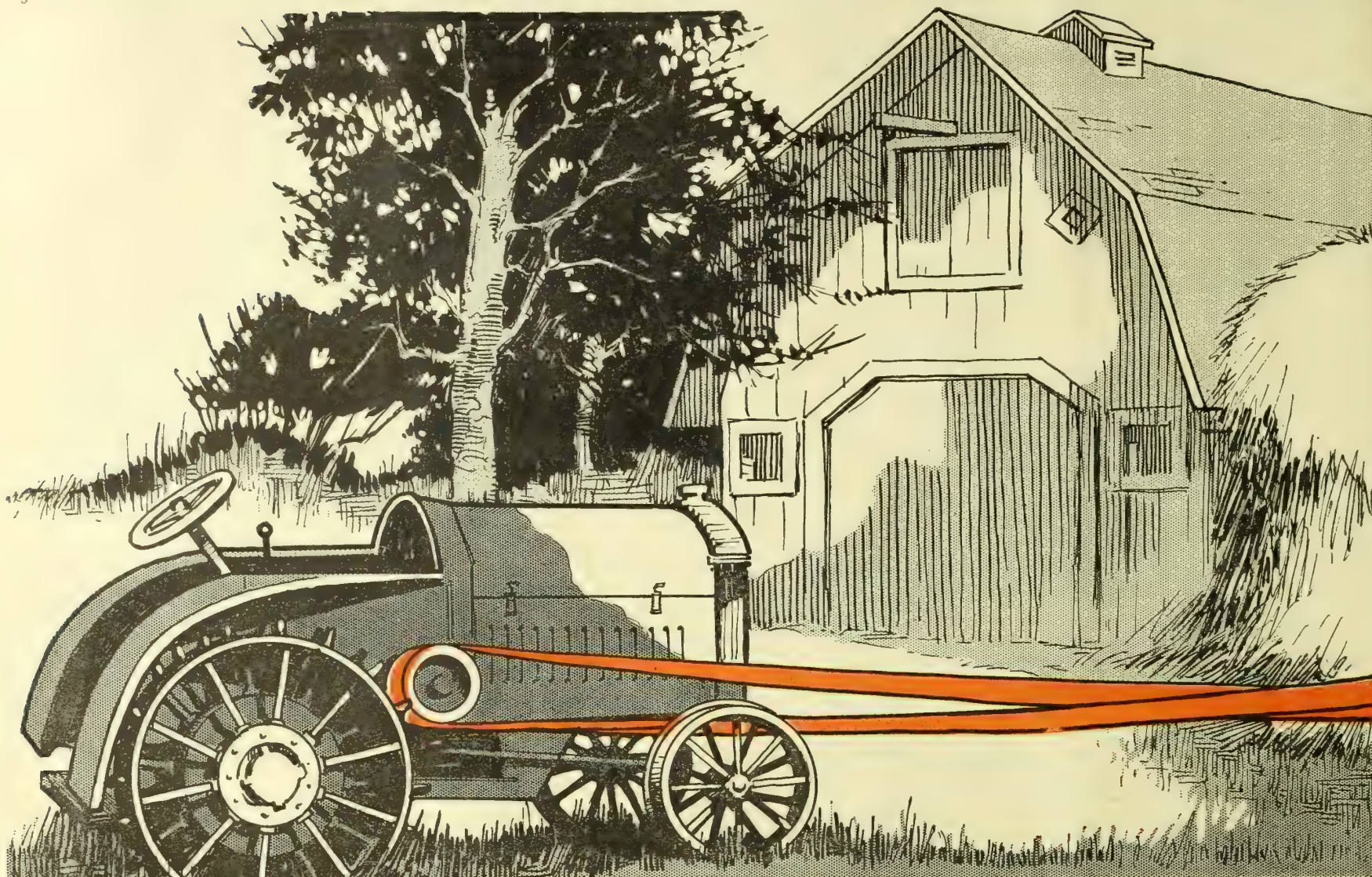
When magnified, the best of bearing surfaces show saw-tooth projections. These must be kept apart.

THE TEXAS COMPANY, Petroleum and Its Products
General Offices: Houston, Texas. Offices in Principal Cities

TEXACO



TRACTOL



Sawyer Belts Meet the Shock

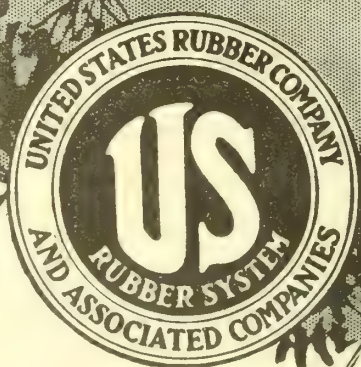
WHEN a Sawyer Stitched Canvas Belt is bringing the power to the baler, the plunger thuds home with the full force of the engine or tractor behind it.

Sawyer Stitched Canvas Belts have stood by successful tractor men for 30 years, resisting moisture and extremes of heat and cold—delivering full power in any weather.

Sawyer Belts grip the pulleys firmly. They have strength to meet the sudden shocks. Use a Sawyer Belt for putting straw into convenient shape for winter use or for sale.

Insist upon the genuine *Sawyer Stitched Canvas Belt* stamped with the "U.S." seal. Keep it in shape with *Sabeco Belt Dressing*, a liberal sample of which is packed with each Sawyer Belt. Most dealers carry both, also the full line of "U. S." mechanical rubber goods for the farm, including rubber belting, hose, valve packings, etc.

United States Rubber Company



TRADE **SAWYER** MARK
REGISTERED



Endless Stitched Canvas Belts

The American Thresherman and Farm Power

B. B. CLARKE, Editor
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A PAGE WITH THE EDITOR

DON'T add your voice to the general wail against the high cost of farm machinery if you are one of those farmers who like to see the barn-lot adorned with machinery. Even a hay-rake will give better service next summer if it has wintered in a nice, dry shed. Like you, it appreciates good treatment.

INSTEAD of figuring how much you have lost during the recent drops in corn and oats, take time for a machinery invoice. Find out what your machines are worth and what it will cost to replace them, and treat them accordingly.

COUNTRY folks are not the only persons who are tying up the broken parts with baling wire, or wearing patches on their trousers. We city folks have had our shoes half-soled so often that the shoemaker can't find the original leather, even in the instep, and prices are going down, Ezra, they're going down.

DESCENDING prices don't spell ruin for anyone. For the past two years the smartest men in this country have been hoping and planning for gradual descents in prices, knowing that we had to get back to reason or else go up in smoke. The old way was to hold our breath until a panic came and then save what we could from the wreck.

BUT take a tip from us, Ezra. Buy as little and sell as little as you can until the Ides of March (in this case we mean the fourth) are past. It will do no good to keep dumping corn or grain on a slumping market. Necessaries always come back to their real values, whether they travel up or down the price scale.

ONE easy way to save is on gasoline. A close observer has said that we waste enough gasoline on pleasure cars alone, in this country, to run the touring cars and taxicabs of France. Money and raw material don't come so easy to the rank and file of the French people as they do to the American farmer; but we'll make the guess that old Hiram can use a little more, just the same. Don't let your car, truck or tractor run a half hour while standing idle. Save every drop you can. You need the money and America can use the gasoline.

THE tractor of the future will find a close second in the farm truck and, from the present outlook, every farmer of any considerable importance will own his truck just as he will own his tractor and his auto. A trip through the country over any public highway will prove that the truck, which is now being used for all purposes in the cities and for hauling cross country, and which one meets as often now as he used to meet automobiles ten years ago, will eventually supplant horses in hauling the farmer's product.

GRADUALLY we are realizing in many ways the things we urged right from the beginning of this publication, one of which is insurance of various kinds, including fire and accident compensation at a cost which any person could well afford to incur. In some ways our fondest hopes have been realized, and ere another year rolls around, unless the Editor is much mistaken, the entire grain growing area will be covered by reliable insurance companies covering all the needs of a thresherman or those using power farming in any form. It has been a long, hard fight to accomplish this, and we have not hesitated at the cost in many localities, but the results have justified the ends.

TO BE a thresherman in name is one thing, to be a thresherman in all the name implies is another thing. We owe it to ourselves, boys, to render in all things the very best that is in us and to conduct our business strictly on business principles. Never leave a job until it has been finished and cleaned up to the best of your ability. Then take out your settlement book and make a settlement while the facts are all fresh in memory, thereby avoiding any possible chance for future disputes. Give your customer a duplicate of his bill in detail, and have him sign a like statement if he does not pay cash in hand. It will save you lots of shoe-leather, and perhaps some hard words.

SOME of us occasionally forget how Thanksgiving came to be an institution. When we do that, we forget what the day ought to be and what it stands for. On this three hundredth anniversary of the first Thanksgiving, it might be a good plan

to ascertain if each of us is still willing to celebrate after the fashion of the Pilgrim Fathers.

The big thing is that these brave pioneers set aside a day on which to thank God and their fellowmen for the blessings they had, not to find fault for the shortcomings of the world as they found it.

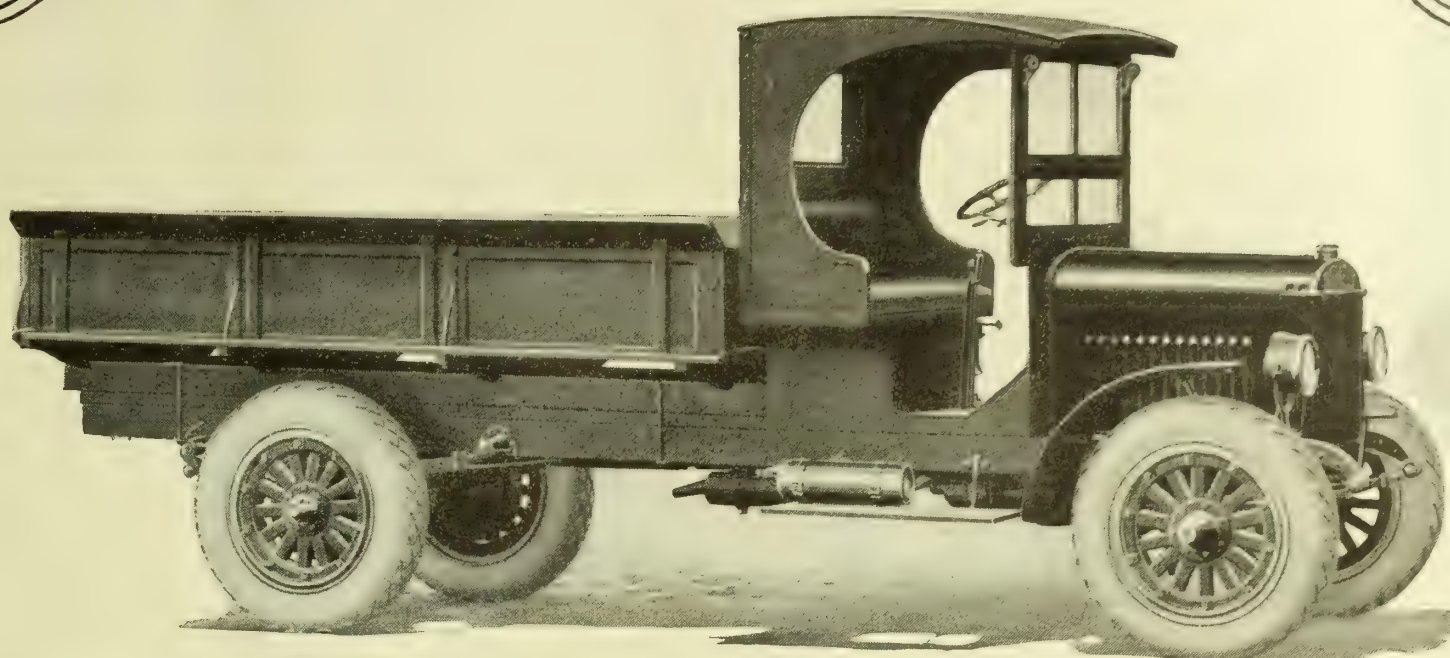
And they found a mighty bleak world, brother, when they looked shoreward at that barren New England coast, three hundred years ago this month. There was no hotel at which they could complain of food and prices. There was no slow train at which they could gibe. Only the rocky shore, as put there by God Almighty, was the comfort they might seek after almost two months of tossing around in a sailing ship on the cold North Atlantic.

Did these forefathers of a great race curse the long, tedious trip, the cold, damp climate, the rocky shore on which they must find a landing? They did not. When, after untold hardships, they had effected a landing, built some rough cabins with their crude saws and heavy axes, they set aside a day on which to thank God for His wonderful mercy.

Now we are not urging that the brethren who read this magazine thank God so excessively and constantly that the profiteers, grain speculators and such fellows run off with all their property. Far from it, Ezra. While these good Pilgrims were thanking God and dispensing turkey to the apparently friendly "Red-skins," their muskets were standing handy and you can bet your bottom dollar that at least one good deacon kept his finger on the trigger.

But, as we said before, they did thank God. They had lots of things in this rugged, comfortless land that they had not possessed in the cheerful villages of England. They had political freedom (or soon would have it), religious liberty, the right to conduct their affairs and raise their children as they saw fit.

You have these same blessings today. When Thanksgiving rolls around, it might pay you to drop into the little country church where our present day Puritans,—those country people who are the salt of the earth,—are giving thanks after the fashion of the Pilgrims of old. It pays to trust God, Ezra, but remember—all others C. O. D.



-and now the Rumely farm truck.

The same high standards of manufacturing excellence, that for over 80 years have distinguished Rumely products, are to be found in this new member of the Rumely family—the Rumely farm truck.

And the same degree of satisfactory performance, that every owner of other Rumely power farming machinery has experienced, is assured buyers of the Rumely truck.

The same great manufacturing organization that designed and is producing the OilPull tractor, known the world over for dependability, economy and long life—and the Ideal separator, unsurpassed for fast, clean and economical threshing—and other power farming equipment, now adds to its line, after long and thorough tests, an equally great product—the Rumely farm truck.

This new Rumely truck possesses every feature that the experience of American truck builders has proved to be most efficient. And

the truck in its entirety has been designed and built to adapt it to farm use in a way that only years of experience in designing farm machinery and a knowledge of farming needs could make possible.

It is a 1½ ton truck, but like all Rumely products, it possesses a great reserve power. It has a worm drive that is recognized as one of the finest in the world. The motor holds an equal rank among automotive engineers and is built specially for heavy farm duty. Even the radiator is one that has been proved most efficient, not only in truck service but in farm service. And, of course, the body is designed also for farm usage—big, strong and of well seasoned materials.

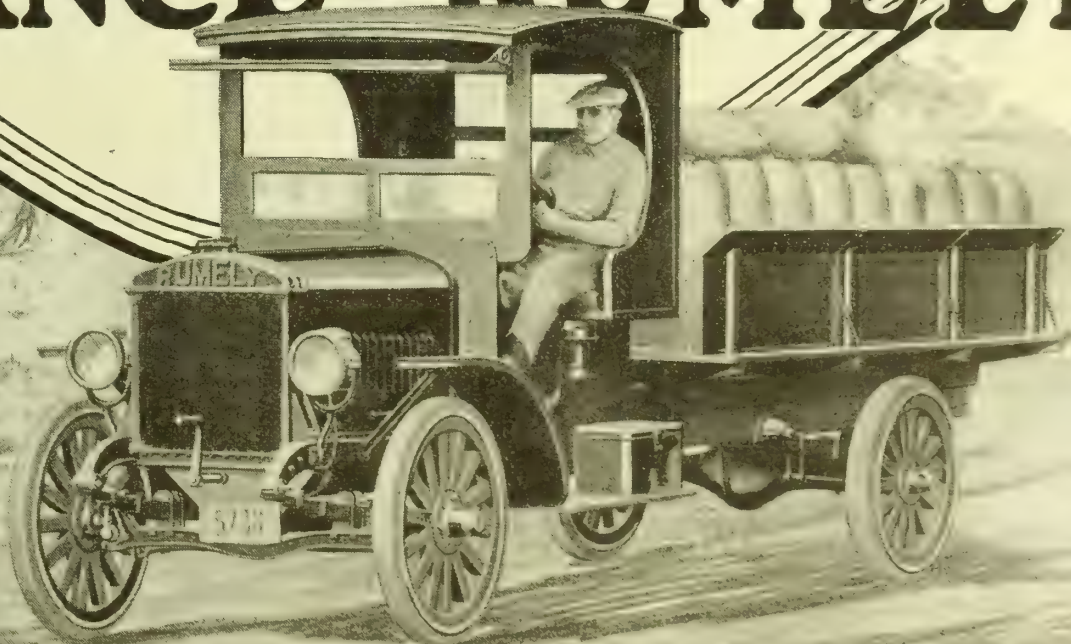
If, in the truck you buy, you want the same dependability, economy, long life and freedom from repairs that have made the OilPull tractor famous, make your choice a new Rumely. Literature on request.

ADVANCE-RUMELY THRESHER COMPANY, Inc.

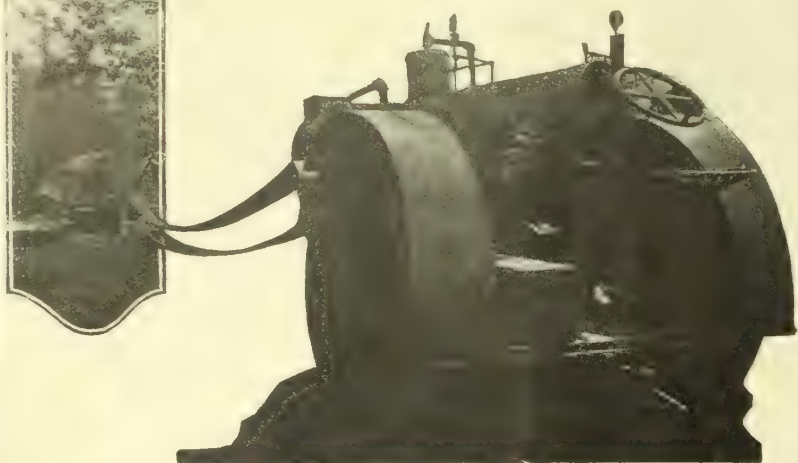
LaPorte, Indiana

29 Branch Offices and Warehouses

ADVANCE-RUMELY



The illustration shows a tractor and power sawmill busy at work, teamed up with a Hettrick Canvas Belt. Wise farmers use Hettricks for all their belt operations.



From Harvest Field to Wood Lot

Threshing and allied belt jobs finished, a good many power outfits all over the country are now moving on to other fields.

Wood sawing especially seems to be popular. And no wonder. For it is the most profitable "fill-in" for the farmer and thresherman.

But, like threshing, it takes a good belt to keep a sawmill buzzing along at top speed all day long—or there's bound to be breaks and interruptions and time lost.

You want Hettrick Canvas Belts. They're finely suited to sawmill work; they're tough, pliable, water and weather-proof—always uniform—always the same.

Jot this down, too—Hettrick Canvas Belts will cut your belting cost by giving you more wear per belt. This item of economy alone is reason enough why you should give Hettrick your preference.

Hettrick Mfg. Company
Toledo, Ohio

Hettrick

Canvas Belts

Mention The American Thresherman and Farm Power

Organization

NORTH DAKOTA will have a brotherhood before the winter passes. Organization threshermen will be glad to know that this state, so logically equipped to furnish a member to the National Association, is almost ready to organize.

Much credit for the progress toward organization is due H. C. Monson, Mayville, North Dakota, the secretary of the Trail County organization. He has made an effort to get the aid of W. H. Newsom, J. B. Parker, and others outside the state with experience in organizing threshermen.

Mr. Monson's original idea was to hold the first North Dakota meeting at Hillsboro. There is now a possibility the meeting may be held at Fargo, where the numerous branch houses can be expected to aid the success of the meeting. The date will likely be early in 1921, just before the Minnesota convention dates.

All North Dakota threshermen, who read this, are invited to write suggestions of dates and places for the convention to Mr. Monson, whose desire it is to make the convention come at a time and place most satisfactory to the largest number of North Dakotans.

Watch the Organization column. The North Dakota meeting will be definitely announced as soon as a decision is reached.

H. F. Borneman, president of the South Dakota Threshermen's Protective Association, writes that he will feel the convention a failure in case his old friend, J. B. Parker, of Indianapolis, fails to arrive in time for the convention. We have been assured that Mr. Parker will be on hand for the convention. In case Mr. Parker and other threshermen do not know the location of the city auditorium in Sioux Falls, we mention it at this point. It is on the corner of Ninth Street and Dakota Avenue. You will see from this that Mr. Borneman is overlooking nothing in order to make his convention a success.

W. H. Newsom, president of the National Association of Brotherhoods of Threshermen, makes note of this fact in his letter: "Please get us right on this matter of trying to arrange the dates of conventions in the various states. We are simply acting as a sort of clearing-house for the several states in order to avoid conflicting convention dates, and this list that we are enclosing to you is only tentative and is the list that we have suggested be adopted by the states as far as possible. If any state finds it im-

possible to accommodate itself to this schedule an effort will be made to make trades somewhere along the line so as to avoid conflicts, so if you publish this list, please publish it in that way."

President W. H. Newsom of the National Association of Brotherhoods of Threshermen is making a commendable effort to have the various state organizations avoid conflicts of dates when arranging for conventions. His work in this respect has been entirely free from officiousness. The National Association officers are simply trying to act as a sort of clearing-house for the several states, and it is to be hoped they get the right sort of cooperation from the state brotherhood officers.

In most cases, the state organizations have been glad to arrange for dates free from conflicts. Below is a tentative list of Convention dates. Minnesota, Indiana, Ohio, Oklahoma, Illinois, Kansas, New Jersey and South Dakota have verified these dates, through their state officers. No doubt the other organizations will soon be able to inform both Mr. Newsom and The American Thresherman and Farm Power that these dates are satisfactory.

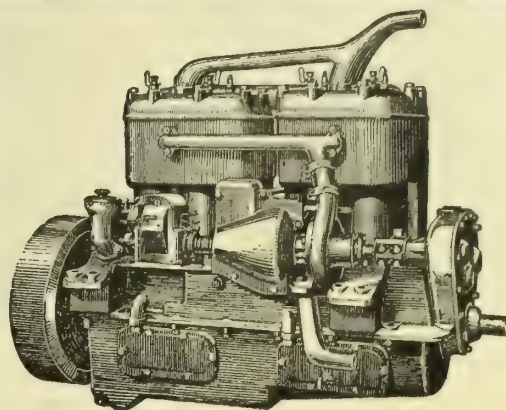
Tentative dates for the various State Brotherhood Conventions in 1921

Minnesota—West Hotel, Minneapolis, January 5, 6, 7.
Indiana—Tomlinson Hall, Indianapolis, January 11, 12, 13, 14.
Ohio—Columbus, January 18, 19, 20.
Pennsylvania—January 25, 26, 27.
Oklahoma—Lee-Huckins Hotel, Oklahoma City, January 25, 26, 27.
Kentucky—January 31, February 1, 2.
Toledo—Bi-State, February 3, 4, 5.
Nebraska—February 8, 9, 10.
Kansas Brotherhood of Threshermen—Chamber of Commerce, Topeka, February 11, 12.
Michigan—Lansing, February 15, 16, 17.
Wisconsin—Madison, February 22, 23, 24.
New York—February 22, 23, 24.
Illinois—Peoria, March 1, 2, 3.
Canada—March 1, 2, 3.
Iowa—March 8, 9, 10.
Missouri—March 15, 16, 17.
Kansas—March 22, 23, 24.
South Dakota—City Auditorium, Sioux Falls, March 15, 16, 17.
New Jersey—Trenton, April 4, 5.
Delaware—April 6, 7.
Maryland—April 8, 9.

As one may see, the places of meetings are not given, in all cases. This information should be sent out at the first opportunity, so the rank and file of threshermen may know just when and where to meet the brothers.

E. A. Gross, secretary of the Minnesota Brotherhood of Threshermen, writes this office that his association is already getting out its program for the annual convention. Mr. Gross writes that a page of the program will be devoted to The American Thresherman and Farm Power. When you attend the Minnesota

Aultman-Taylor



Here's a World of Steady Power

Look under the hood of the Aultman-Taylor 15-30 tractor. There you get the answer to that all-important question, "Has it the power?"

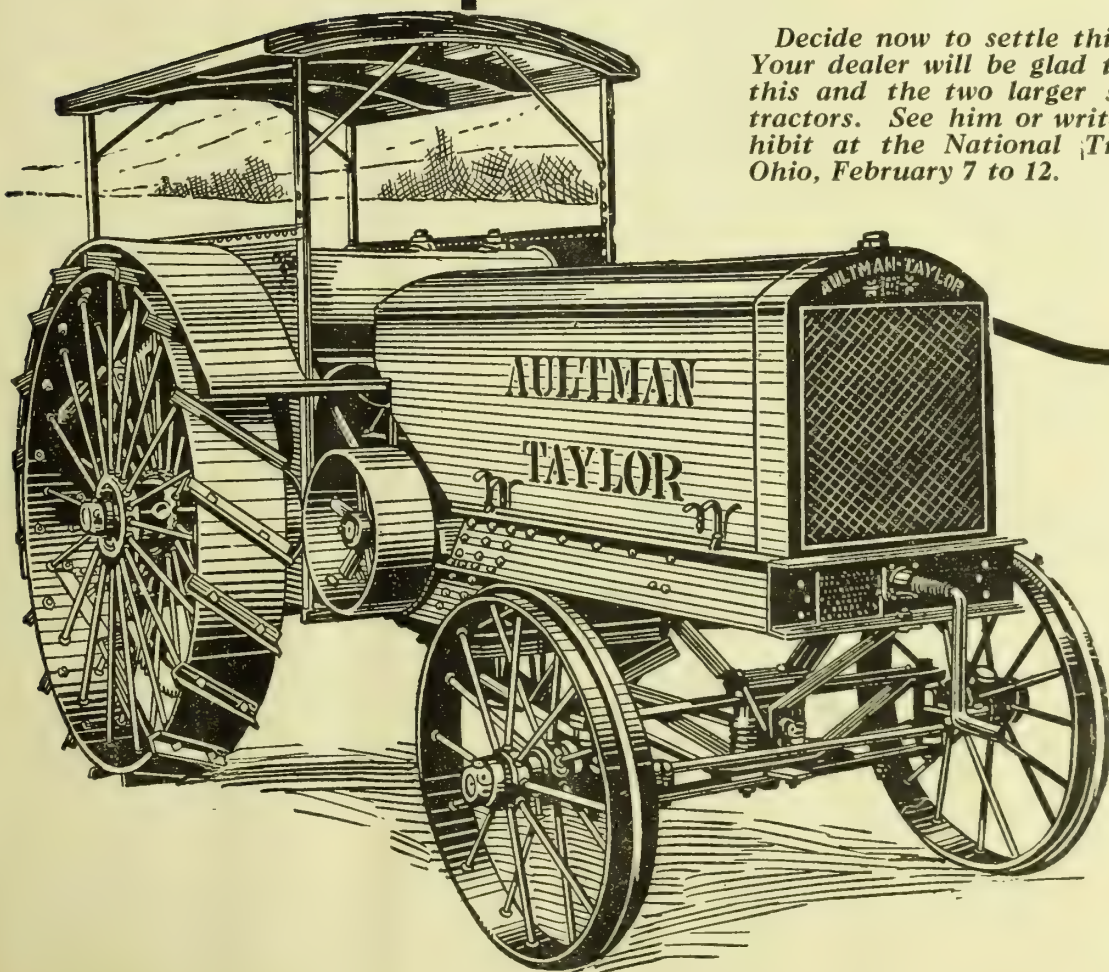
Here's a compact, powerful, perfect piece of engineering—this 15-30 motor. Its look speaks work. A vertical, four-cylinder, four-cycle kerosene motor—packed with power. It is durable. It is accessible. The cylinders are cast of semi-steel in pairs, with detachable heads.

Rated at 15-30 it develops as high as 21 H. P. at the drawbar and 34 at the belt. Such is the motor that makes the Aultman-Taylor 15-30

A Real 4-Plow Tractor

This all-job tractor pulls 4 fourteen-inch plows under all reasonable conditions where other farm-size tractors pull but two or three—and it easily handles as large as a 27-inch cylinder thresher. It is a tractor with the power to put through any farm job, belt or drawbar, that you set it to. It is the tractor you need on your farm.

Decide now to settle this tractor question right. Your dealer will be glad to give you full facts on this and the two larger sizes of Aultman-Taylor tractors. See him or write us direct. See our exhibit at the National Tractor Show, Columbus, Ohio, February 7 to 12.



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PORT HURON 28x46 RUSHER WITH WING CARRIERS, OPERATING WITH 15-30 FARM TRACTOR

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.



The famous Mule-Kick Separation bats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing. Five sizes. Get our free catalog.

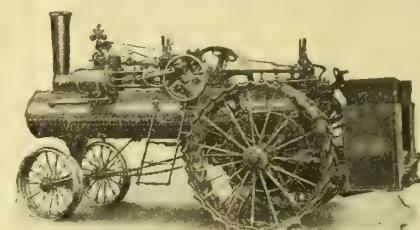
What Henry Smith Says About It

"I am running a 28x46 Port Huron separator having wing feeder, wind stacker and weigher, with 15-30 International Tractor. I just put on the wing feeder this season and people told me the tractor would not have power enough to run the separator with wings, but I can say after twenty-one days of threshing in all kinds and conditions of grain that the power is ample to run the machine to capacity."

"The farmers are well pleased with the rig and I have all the work I can do. The Port Huron separator does A-1 work in cleaning and saving the grain, and it is certainly a light runner."

(Signed) Henry Smith, Faribault, Minn.; R. F. D. No. 1.

PORT HURON Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the mar-



ket today. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them. Two sizes. Catalog free

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Lincoln, Nebraska

Port Huron Engine & Thresher Co.
Logansport, Ind.

Mention The American Thresherman and Farm Power

convention, be sure to hear what our friend Mr. Gross has to say about us. The Minnesota convention will be held at the West Hotel, Minneapolis, on January 4, 5 and 6, 1921.

John A. Scott, president of the Oklahoma Threshermen's Association, writes us that the dates for the Oklahoma convention have been changed. The present arrangement is for the convention to be held on January 25, 26 and 27, 1921. Headquarters will be at Lee-Huckins Hotel, Oklahoma City.

T. I. Davidson of the Illinois Association writes that the annual Threshermen's Convention to take place in Peoria, March 1, 2 and 3, 1921, is expected to be the biggest and best convention that has ever been held at Illinois. He writes: "As our insurance company has been a grand success, we will have something more to offer the threshermen than we have had in the past."

Tim Payne, secretary of the Kansas Brotherhood of Threshermen, writes us from Oskaloosa that the threshermen of Kansas are going to have to fight for their rights on the improved highways or keep off of them altogether. He says that the Kansas meeting comes while the legislature is in session, and that he figures this as about the time when a

bunch of threshermen might look good. Tim Payne and the Kansas threshermen intend to visit the legislature in a body. This sort of watchfulness on the part of the threshermen ought to insure them of proper treatment at the hands of the legislature.

W. F. McCreery of the Indiana Brotherhood of Threshermen writes us that his organization will follow the custom established in 1910 of issuing a year book. The threshermen have come to expect this year book and it is their hope that the book for 1921 will surpass all earlier books in points of interest. The Indiana convention will be held at Tomlinson Hall, Indianapolis, January 11, 12, 13 and 14, 1921.

Thresher Insurance for Every State

The Indiana Liberty Mutual Insurance Company under the leadership of that staid and tireless worker, William H. Newsom, has acquired sufficient capital with which to write liability insurance for threshermen in any state in the Union. The Liberty Underwriters has entered into a contract with the Indiana Liberty Mutual Insurance Company to carry on its business in all the states excepting Indiana, and will begin organizing its forces to that end at once. There is no excuse now

for threshermen and power farm users to not carry indemnity at a very low rate, thus protecting themselves against possible accidents to employees.

George Durban, secretary of the Ohio Threshermen's Mutual insurance association, has written to call attention to the annual convention to be held in Columbus, Ohio, on January 20, 1921. As the Brotherhood's convention will be held at the same place on the two days preceding no doubt many of the threshermen will arrange to remain over this event.

He Had No Insurance

A matter that is of vital interest to the farmers of Indiana came up for settlement in Spencer on Friday, October 15, when two members of the State Industrial Board, Judges Perkins and Fox, heard the evidence and arguments in the petition of James Shultz vs. Hamilton Berry and John Eastes for damages resulting when Shultz had his left arm torn off while working as engineer for Berry who was operating a threshing outfit on the farm belonging to Eastes in Montgomery township. The accident occurred August 2, 1920, when Shultz attempted to replace a belt on the separator which had started to come off. The belt jumped from the pulley, wound

around his arm and so badly injured it that Drs. Pierson of Spencer, and Holland, of Bloomington, amputated the arm four inches above the elbow.

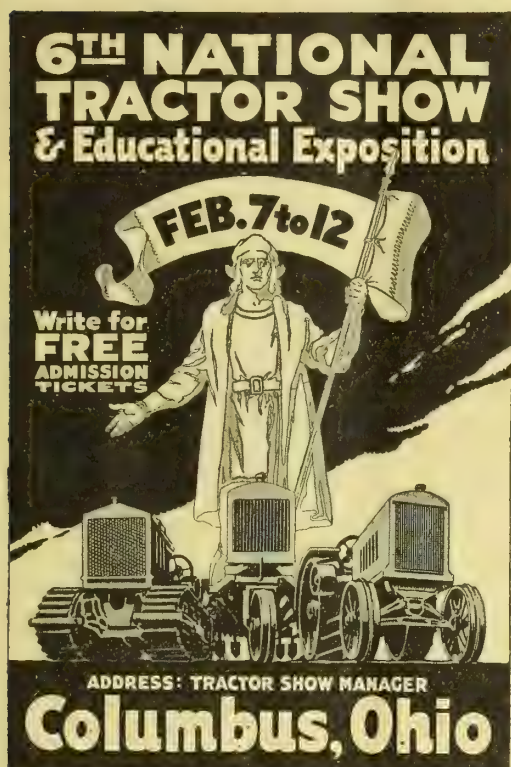
Acting under the provisions of the Indiana Workmen's Compensation Law, Shultz filed a petition for damages with the State Industrial Board against Berry, who owned the threshing outfit, and, acting under Section 14 of the Workmen's Compensation Law, made John Eastes a party to the hearing. Under this section any party, firm or corporation who contracts for any work must see to it that the person or firm they employ carries workmen's compensation insurance or else be liable for damages in event an accident occurs and the employers of the workman are unable to pay the claim allowed. In the case of Shultz it is alleged that Berry is without property and that under the law Eastes is liable for the damages inasmuch as he did not see to it that Berry carried insurance.

In his petition Shultz states that he is an engineer and worker in the stone mills and was capable of earning six dollars per day and hence is entitled to the full amount of damages allowed under the Workmen's Compensation Law for partial disability, the loss of an arm, which is thirteen dollars and a half a week for two hundred and fifty weeks which, together with his nurse hire

(Continued on page 45.)

Make Note of this big Exposition

HERE is something that no progressive farmer can possibly afford to miss. It marks the greatest forward stride in educational exhibits ever undertaken.



MAKE no mistake. This Sixth Annual National Tractor Show is not just a tractor demonstration. It is a gathering of the leading men in agriculture and *all* men interested in mechanical power as applied to farming. They will get together in the comfortable buildings of the big Fair Grounds at Columbus, Ohio, this February, for the exchange of new and profitable ideas.

A wonderful program has been arranged. Eight huge buildings will be devoted to an exhibit of power farming equipment, to demonstrations, lectures, meetings and entertainments that are *free* to all who come. Tractors of every size and type, together with tractor drawn and power operated tools of many kinds, will be combined in a spectacle of enormous instructive value. New and highly interesting machines and methods will be demonstrated. Farm power usage will gain astounding impetus.

Here will be a real course in power farming condensed into an intensive five days. Startling new successful ideas without number will be shown. Valuable knowledge will be gained by every farmer—practical facts that can at once be turned to profit.

Note the Coupon

The coupon below will bring you a special ticket entitling FREE ADMISSION along with a booklet explaining the full instructive and entertaining program arranged. So fill it out and mail it. It does not obligate you in any way. But you will surely come, once you get the full details of

Could You Say That You Wouldn't Want to be Here?

You can take it for granted that you will have a good time. There will be plenty of fun. But, far more important is the big list of famous men and practical successful farmers who will be here to meet you face to face and go into the problems and possibilities that confront you in your work today.

There will be lectures by men who know agriculture as a wonderful science and by men who know it as a bread and butter earning business. And at every meeting there will be open discussion to thresh out every man's individual views.

The most famous speakers, nationwide celebrities—the men you have always wanted to meet—will be there. And for the women, too, will be a program to keep them busy and interested every minute.

Hundreds of different tractors, tractor drawn and power operated tools, farm lighting plants, etc., will form the most tremendous display ever witnessed.

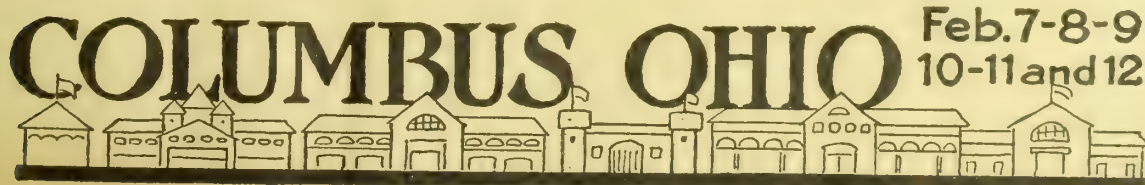
Of course you want to come! Of course it will pay! Use the coupon now to obtain more complete information and insure free admittance.

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And Educational Exposition

Arrange your plans now to come and bring your wife and family. Ample accommodations are assured for one hundred thousand farmers who will attend. Every single district in the United States will be represented. Columbus, the country's most central city, bids you welcome.



National Tractor Show Committee.
Columbus, Ohio.

Gentlemen:

Please send me your booklet regarding The Sixth Annual National Tractor Show. Also enclose free tickets for myself and _____ others of my family.

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THE GANDY original stitched cotton duck THRESHER BELT is made of strong, closely woven cotton duck, specially folded and welded together by close lock-stitching and seasoned in oils by a secret process. It is the result of more than forty years' study of traction power coupled with quality material and unexcelled production facilities.

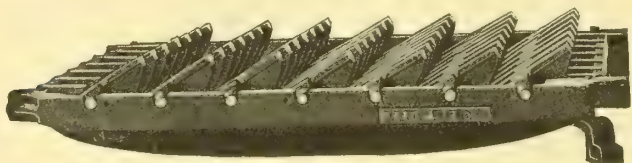
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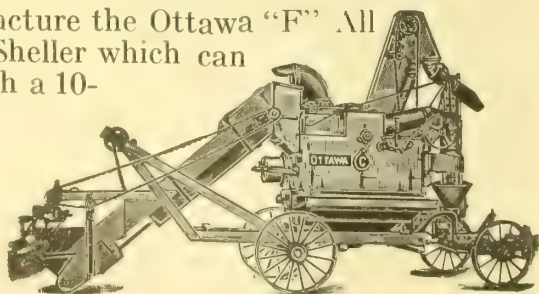
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Ottawa Cylinder Corn Shellers

**The OTTAWA gets all the corn no matter
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We also manufacture the Ottawa "F" All Steel Cylinder Sheller which can be operated with a 10-horse gas engine.



Write for
Catalog

KING & HAMILTON COMPANY OTTAWA, ILLINOIS
Branch Houses: Council Bluffs, Ia., Sioux Falls, S. D.

Women's Department

Thanksgiving

JESSIE ANDREWS

For glimpses of the western hills,
Still longing, yearning for the sky,—
For this expanse of heavenly blue,
Now flecked by fleecy, floating clouds,
Now shrouded close in misty gray,—
For all the pulsing life of dawn,
When opening wild-flowers bring with dew,
And hearts leap up with morning joy,—
For all the year's fair round of days,
I give Thee thanks, I give Thee praise!

For gold of fleeting sunrise hour,
When waking birds renew their song,
The glad, glad morning long to sing,—
For all the hush of glowing noon,
The napping-time of bird and breeze,—
For gold of eve, for evening-star,
And silver crescent hovering low,
When heads are bowed for evening's peace—
For starry nights and sunlit days,
I give Thee thanks, I give Thee praise!

As Winter Approaches

"I am always so melancholy, as winter approaches. It seems that most of my trials and so many sad anniversaries come with winter."

It was my dear little friend who spoke, the mother of four bouncing children, with a good home, a kind husband, and, it would seem to the on-looker, but little to fear from the future. But she was of a disposition that took frequent and "coddling" stock of her fears. I say "coddling" for that is exactly what I mean. I believe, all unconsciously, she enjoyed sitting down, (mentally, if not physically,) and "coddling" the possibilities of trial and sorrow the future might hold for her. This is, to my mind, a most unwholesome habit, for a habit it soon becomes. Fear and melancholy brooding are not only weakening to the mind and spirit but to the body, as well.

It might be a nice point to determine whether one is "melancholy" because below par, physically, or below par, physically, because one is melancholy. We are so interdependent—body, mind, and spirit, that the condition of each is bound to affect the other. If one feels depressed, it is surely wise to seek out the cause. A man has worked, day in and day out, beyond his capital for daily effort. If he keeps on, some day he will have drawn so lavishly on his reserve that he will wake up a bankrupt in nervous energy. A woman has been doing house-work—cooking, sweeping, washing, mending, and has added to all these church or club work, when she should have been resting, until she has severely overtaxed her vitality and she vainly tries to be cheerful.

In such a case, I firmly believe the first essential is *rest*. I have implicit confidence in that prescription, for I have received such wonderful help from it myself and seen it do so much for others. Some day, when I get all the other things done I want to do, I shall establish a *rest* sanatorium, and I think the only medicine I shall prescribe will be *rest*, in different sized doses, as the patient is able to take. If one sets out in earnest, it is surprising how much rest one can manage to take, even in the seemingly

continuous round of daily duties. Eliminate everything possible, while giving yourself the "treatment," and then seek, as if for a much-valued lost treasure, every second of relaxation.

Do you know Kipling's story of the Maltese Cat? It is a long, long time since I read it and, because I am "resting" I do not propose to go upstairs to get the book to look it up, but I remember the "point" of the tale.

The "Maltese Cat" was a pony! And more than that, he was a polo-pony. Now I don't know a thing in the world about polo. I never saw a



Can You Do As Well?

What do you think of the contents of this basket for a Thanksgiving dinner from her very own garden? But there is still more to be told. The hat she wears was made (by her own hands, too,) from the husks of corn that grew in the same garden that produced the other vegetables you see in the photograph. Why worry about H. C. L., if you have a spot of fertile ground!

game, I do not believe I ever read a description of a game. But Kipling makes you understand that the ponies, in polo, work to the utmost of their strength. When the crucial time comes, the pony, as well as his rider must be at his best in physical and nervous condition, or the point will be lost. To see the Maltese cat when he was not in action, you would have said:

"That sleepy, lazy creature is surely no good."

But that was just his secret. He had learned how to relax and rest at every possible chance. When the dash was over, down went his head, his eyes closed, his very body drooped, as every muscle sagged and

he rested for all he was worth. The result? When the command came for another dash, he was off, freshened for the fray and his endurance was a marvel.

I may seem to have wandered from my "text," but I do not think I really have gone far astray. As winter approaches, live as simple and normal a life as you can; do not "coddle" your fears; rest as much and as often as possible and if melancholy comes, do not inflict it on others. There is nothing more subtly contagious. Try the virtue of rest, of outdoors, of congenial company and, most of all, live more continually conscious of the presence of God.

For the Thanksgiving Table

It seems, as the children say, "ages ago" since I have turned to a certain section of my recipe book. The book, by the way, is one that, like Topsy, "just grewed." In it are collected recipes that have been handed down in my family, for generations. There are also "favorite" recipes of friends, a few that I have myself originated, and many that have been collected from miscellaneous sources. The book is a well-worn one, as you may imagine. I have kept house in many different parts of the country and under a great variety of circumstances of convenience and inconvenience. But that recipe book has accompanied me and been a faithful helper through it all.

The "section" to which I referred in the opening sentence, is the one marked "Holiday and Anniversary Cooking." There are arranged recipes that seem especially suitable for Thanksgiving, Christmas, and birthday things. The reason that I have so long skipped that part is obvious. When one has to count the cups of flour used, in order that one's soldiers may not lack, or count the spoons of sugar, either because one can get no more or because it is too high to buy, one does not turn to recipes such as that part of my book holds. But the war is over, thank God! And sugar is cheaper and this year we are going to revive, on our Thanksgiving table, some of the cooking of the good old days.

First there will be a turkey. Some of us have raised them but others of us will have to buy. Here is what my recipe book says under the caption:

TURKEY LORE.

When selecting a turkey, look at the skin to see if it is moist and delicate, without bruises and discolorations. See if the feet are smooth and yellow, for an old fowl has coarse skin and hairs, while the feet and legs are dark, with hard scales. Feel of the turkey to be sure that it is heavy in proportion to its size, otherwise there will be a large proportion

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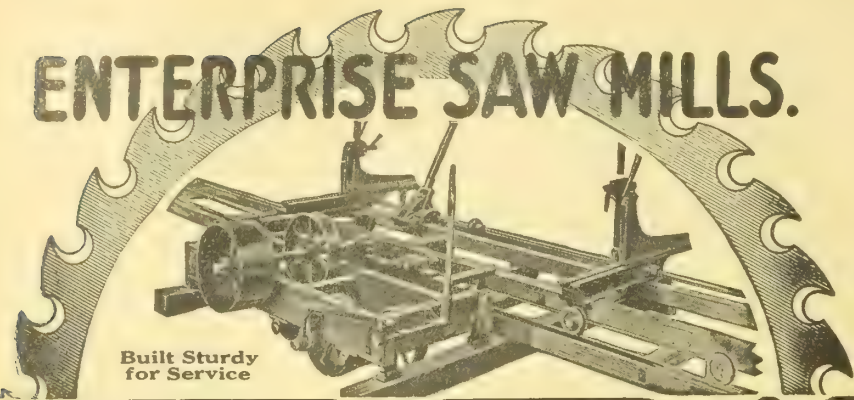


any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H.P. Magneto equipped; no batteries lever controlled.

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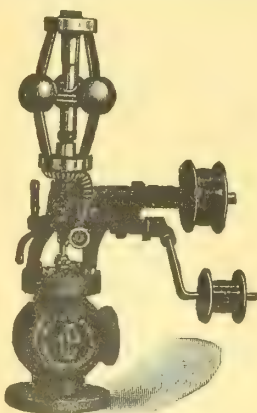
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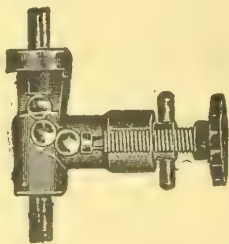
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of bone. In a young turkey the breastbone is pliable. Although the turkey may have been cleaned by the butcher, carefully wipe it inside and out with a cloth wrung from hot water. Do not lay it in water, as that will draw out the juices. Cut off the legs below the joint, trim the neck, leaving an inch or so of it to turn and fasten with a skewer. Wash the giblets in soda and water. Cut the outer skin of the gizzard with a sharp knife and peel off without breaking the inner sack. Throw away the inner part and lay the outer part in salted or soda water. There are many different kinds of dressing used in turkey, among which are sausage, chestnut, oyster, cracker, veal or bread crumbs. Whatever kind you use, do not stuff the turkey too full, as this will cause the dressing to be soggy.

And this is the approved "mince meat" in our family.

ENGLISH MINCE PIES.

Boil and chop fine two pounds of lean beef; mix with one pound of suet, also chopped very fine. Peel and chop five pounds of tart apples; seed and cut in half two pounds of raisins; wash thoroughly two pounds of currants; wash and stem one pound of Sultana raisins; cut into tiny pieces half a pound of citron. Mix all these ingredients thoroughly together then season with a tablespoonful each of cloves and allspice, two tablespoonfuls of mace and the same quantity of cinnamon, one teaspoonful of ground nutmeg and one tablespoonful of salt. Sweeten with two and one-half pounds of brown sugar. This is better if allowed to stand for several weeks before using. Pack away in a stone crock. If it appears dry when opened, add a little cider or fruit juice from canned fruits.

The recipes for mince pies are naturally very much alike, and anyone can make changes in the ingredients to suit the taste. The foundation of all of them is meat and apples; the best rule is to have twice the quantity of apples to that of meat. Sweeten and spice to your taste.

The following "sweeties" have tickled the palates of generations of children and adults as well.

CREOLE KISSES.

Beat together one pound of very fine confectioner's sugar and the beaten whites of six eggs for fifteen minutes. Then add one teaspoon cream of tartar and beat until mixture will stand alone. Add one teaspoon vanilla and one cup chopped nuts. Bake in thin layer. When done, cut into narrow strips and roll while hot over small stocks.

CHOCOLATE CARAMELS.

Two cups of brown sugar, one cup molasses, one cup grated chocolate one tablespoon flour, butter size of a walnut. Boil slowly until it forms a soft ball in cold water.

COCOANUT MACAROONS.

One egg beaten light, one cup cocoanut, one cup powdered sugar, one heaping tablespoon flour. Flavor with vanilla. Drop on inverted tins and bake in medium oven until light brown.

MARGUERITES.

Make a plain boiled frosting. Stir into it one cup chopped nut meats, also raisins if desired. Spread over long-branch wafers and brown in quick oven.

CRACKER JACK.

Two quarts popcorn, two cups peanuts, one cup cocoanut. Put in large bread pan and pour over it the syrup, stirring constantly until it becomes cold. Before it hardens mould quickly into balls with the hands. The syrup is made by boiling until it threads, three cups of sugar, one-quarter cup molasses, and a pinch of salt.

All Around the Home

Oranges and chopped nuts, with lettuce hearts and French dressing, make an excellent salad.

A handful of chopped ham, added to the soft dough of drop biscuit, is savory and appetizing.

It is worth remembering that if the lid of a safety match box is missing the matches can be lighted upon common glass.

Do you always add a "pinch" of salt to all cakes, whether the recipe reminds you to or not? It makes a "heap o' difference" in the flavor

To make the window box a constant blooming pleasure use to each gallon of water once a week a tablespoon of washing ammonia.

The bones left from the roast beef or lamb can be put into a pot with potatoes and boiled. They will give the potatoes a rich flavor.

Before putting the potatoes into the oven to bake, try greasing them thoroughly with bacon fat or some other "tasty" grease, and learn how good they are, treated this way.

Place two strong hooks a foot apart on the inside of the closet door to your bedroom. Attach a double strap to each hook and keep an extra double blanket between the straps. This arrangement will save a good many steps.

We used to think it must be due to pure carelessness, when some one "mistook" a bottle of harmful medicine for something else, until it happened in our own household. Since then, we tie the corks into all poison bottles. Now if anyone gets at the contents of a "poison" bottle, he is apt to know what he is doing.



These bottled samples represent a distillation test of crankcase oil made in the Madison-Kipp laboratory.

What the Crankcase Tells About Tractor Lubrication

An extensive series of recent tests with a standard tractor motor—equipped with a lubricating system using oil again and again—showed that after a typical run, 34% of the crankcase contents consisted of gasoline.

12% was sediment and grit; only 54% was real oil.

With such considerable admixtures of gasoline and sediment in the oil, the maximum horsepower of the motor dropped off very much toward the end of the day's run—and fuel consumption was exceptionally high.

So much gasoline went past the pistons—and so much power was lost—because the used-oil did not form a really good seal between the piston and the cylinder wall.

By equipping this motor with a Madison-Kipp Fresh Oil System, using fresh oil only and using it but once, the gasoline content of the crankcase was reduced an average of 65%—almost two-thirds.

The maximum horsepower was increased an average of 17%.

The saving in fuel consumption amounted to 13%.

This greater maximum power, lower gasoline consumption, and reduced fuel condensation shown by Madison-Kipp fresh oil lubrication are all largely due to the better oil-seal provided by fresh oil.

And in addition there is an oil saving, frequently amounting to 83%.

Similar results have for years been demonstrated in the field by kerosene and gasoline burning motors on many thousands of tractors.

Since Madison-Kipp Fresh Oil Systems are really a part of the tractors they serve, the only way in which the tractor user can secure the savings and freedom from trouble that they provide, is to buy the product of manufacturers who send out their tractors Kipp-Equipt.

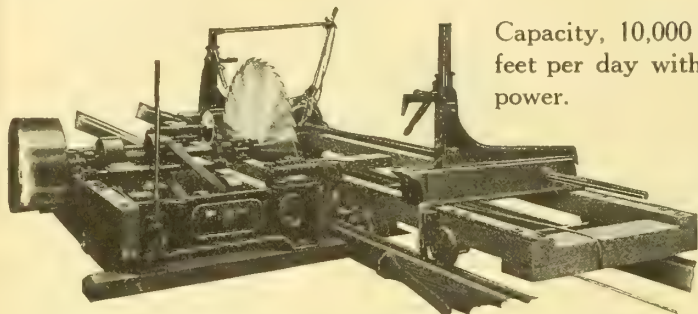
These tractors cost no more and are worth much more.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators

**Fresh
Oil
Systems**

DIXIE "E" SAW MILL



Capacity, 10,000 to 25,000 feet per day with 25 horse power.

We make a full line of high grade mills of all capacities, in fact, anything needed for saw mill or wood cutting.

HILL-CURTIS COMPANY

1504 North Pitcher Street, Kalamazoo, Mich.

You Don't Have To Pack So Often

when you use

"PALMETTO" Packing

as it is made to give long service under hard conditions.

Lubricant in each single strand keeps it soft and pliable.

Greene, Tweed and Co.

Sole Manufacturers
109 Duane St. New York



Let us send you a working sample without charge. It will convince you of its long service quality.

Insure Your Employees

The Compensation Act compels you to carry insurance on employees if you have in common employment three or more employees at any one time.

For failure to comply with the Act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probably cost of settling claims.

Fracture of spine (total disability)	\$10,000.00
Loss of eye	\$ 1,990.00
Loss of hand	\$ 2,500.00
Loss of index finger	\$ 650.00
Broken leg	\$ 200.00

Even though the law did not require you to carry insurance, can you afford to take chances of having an employee seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us for a minimum premium of \$30.00?

Let us assume all your liability. Write us today for application blanks and full particulars.

Threshermen's National Insurance Company, Ltd., Mtl.

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

Listen To Me

MANY an honest heart beats under a homemade shirt.

ROME wasn't built in a day, but you can see what "hitting the ball" did.

DON'T knock. The hammer might fly off the handle and many an innocent bystander has been killed accidentally.

SOME men are born gentlemen but they mess up the job considerably in later years.

SOLOMON had a few hundred wives, all of which goes to prove Solly was a wise man. Most men can't manage one.

IT is the uncertainty of things and the things that are not known to us until they happen that make life worth living. If we could know life's events before they happened we would be a bunch of "nuts."

THE fellow who drives to his work or goes for a pleasure ride in his six-cylinder automobile is not the one who is ready to strike at the least provocation.

THE papers have been full of articles lately from men who have made their "pile," telling how they got it and what we should do to get it. I will have an article explaining fully how I got mine just as soon as I get my grocery bill paid up and my last year's suit paid for.

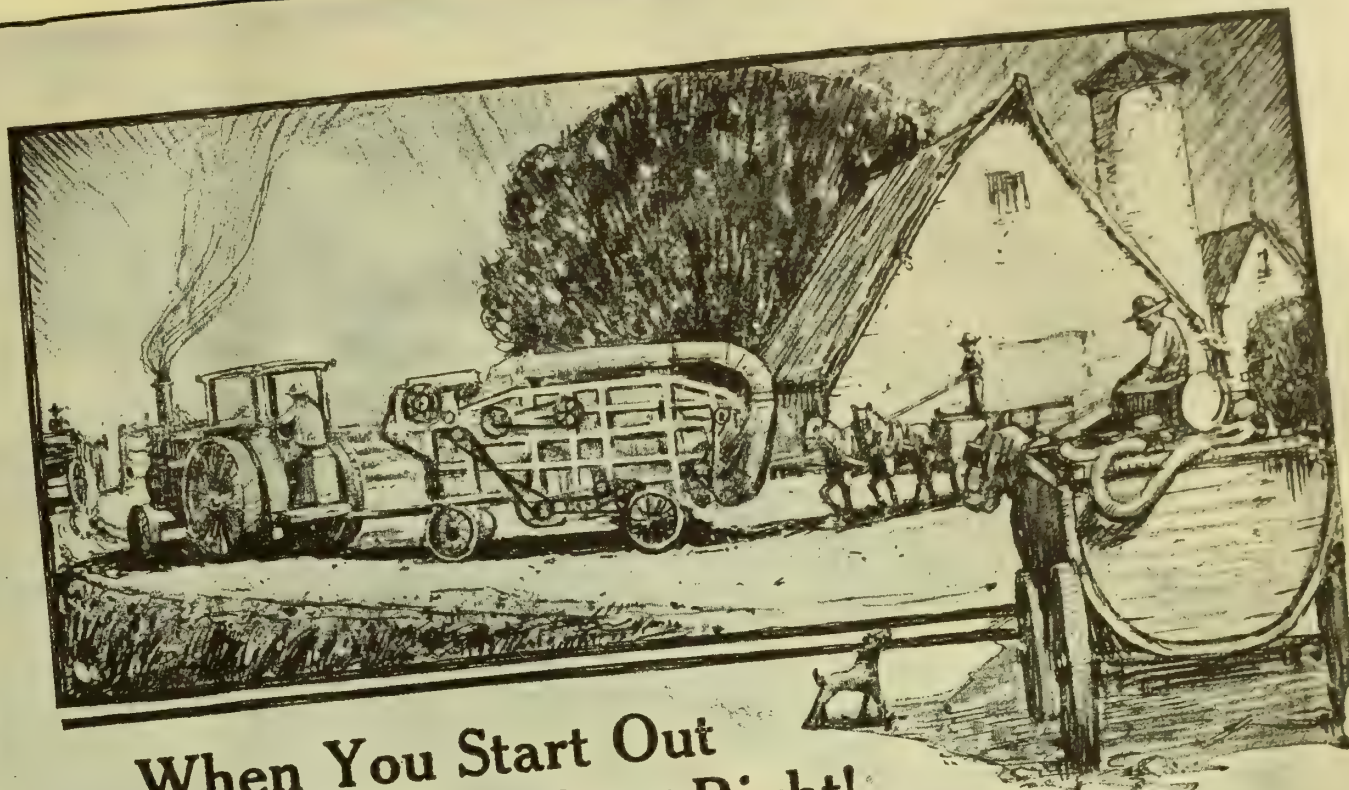
A MAN is only as valuable as he makes himself. If you want to stay that way, you will have to "scratch gravel" for there is always some one right behind you just waiting for you to get that "they can't get along without me" feeling.

NINETEEN TWENTY-ONE is going to be a great year for those fellows who used to swear off on "booze" every New Year's day. The chances are they will most of them be able to keep that resolution this time, not being able to get the other.

THIS board of trade and stock market juggling the prices of the stuff the farmer raises should be stopped once and for all. What in the devil does a stock broker who has lived in the city all his life know about the values of farm products, and by what right does he say what the price will be on it? The betting is ten to one that if given a milk pail and turned loose to milk a cow he would set the bucket under the cow and work her tail like a pump handle to get the milk.

WHERE are the days when neighbors used to gather at each other's homes and have big dinners, where everybody had a good time and friends that were friends "stuck" by each other, where you made oyster soup in a wash boiler and everybody felt at home and when some member of the family was sick the neighbors got into each other's way trying to help out, they came so thick? Where you called them by their first names and where you borrowed sugar and other things from each other because you knew you were welcome to anything in the house, and where you were not looked on as a "homewrecker" because you were friendly with the neighbor's wife. It may not be considered good form today but when it came to life being worth while, we "had it on you" seven thousand ways. It might be well to "turn the clock back" on some things.

BROTHER, if you think well of a man, tell him so in good old English. We may say "bull," but of things we all like best this same old "bull" heads the list. We all "fall" for it, and miss it if we don't get it. There is no one but what likes to be fed a little of it. That is because we like to be appreciated. Just a few nice things said now and then have changed the whole course of men's lives. Of course that doesn't mean to make it your stock in trade, but if any one deserves a little praise, don't wait until he is dead and then say what a fine fellow he was, because by that time it doesn't make a darned bit of difference to him. We all like to be appreciated and if we would use the "hammer" less and the salve stick more the result would put the whole world on a more friendly basis. We must have a more friendly feeling for each other or this grand old country of ours will be in a bad way. It was standing by each other and pulling together that put our country in a position to be dictated to by no one. It is the best example on earth of what team work will do, and in this mad scramble for the almighty dollar let us not forget that we are each dependent on the other and let's be fair in all things.



**When You Start Out
This Season, Start Right!**

THE 1920 THRESHING SEASON is right at hand, Mr. Thresherman. The day will soon come when you will take through a heavy season's work.

Above is pictured a portion of our page advertisement which appeared in *The American Thresherman* for June, 1920.

Did You Take Our Advice, Mr. Thresherman?

AT the beginning of the threshing season we gave you valuable advice in these pages. We told you how to go through the entire season—and many seasons to come—with ample belt power for the heaviest straw, and with absolutely no pulley trouble—no stripped “covers,” no damaged belting, no pulley repairs or delays.

We told you to pull off the old “covered” pulley from your separator and replace it with Rockwood, *The Drive Pulley*.

Did you take our advice, Mr. Thresherman? If you did *not*, probably you experienced again the costly delays about which we warned you.

Profit by this experience! Decide *now* that you will never go through another threshing season without Rockwood, *The Drive Pulley*, on your rig. It is the acknowledged standard pulley for farm machinery—the pulley you will find today on new Avery Separators, Port Huron Threshing Machines, Huber-Banting, Wood Brothers, Frick, Aultman-Taylor, Minneapolis, Cape, Illinois and other good makes of machines.

Decide now that the next machine *you* buy will be equipped with Rockwood, *The Drive Pulley*. Manufacturers who supply it are giving you the best—are guarding you against trouble—and saving you money in the long run.

While you have time—*today*—write for free descriptive booklet giving prices, sizes and full information about Rockwood, *The Drive Pulley*. It's a part of Rockwood service to tell you of the benefit Rockwood, *The Drive Pulley*, can be for you.

THE ROCKWOOD MFG. CO.

1926 English Ave., Indianapolis



ROCKWOOD *The DRIVE PULLEY*

[Section removed to show construction]

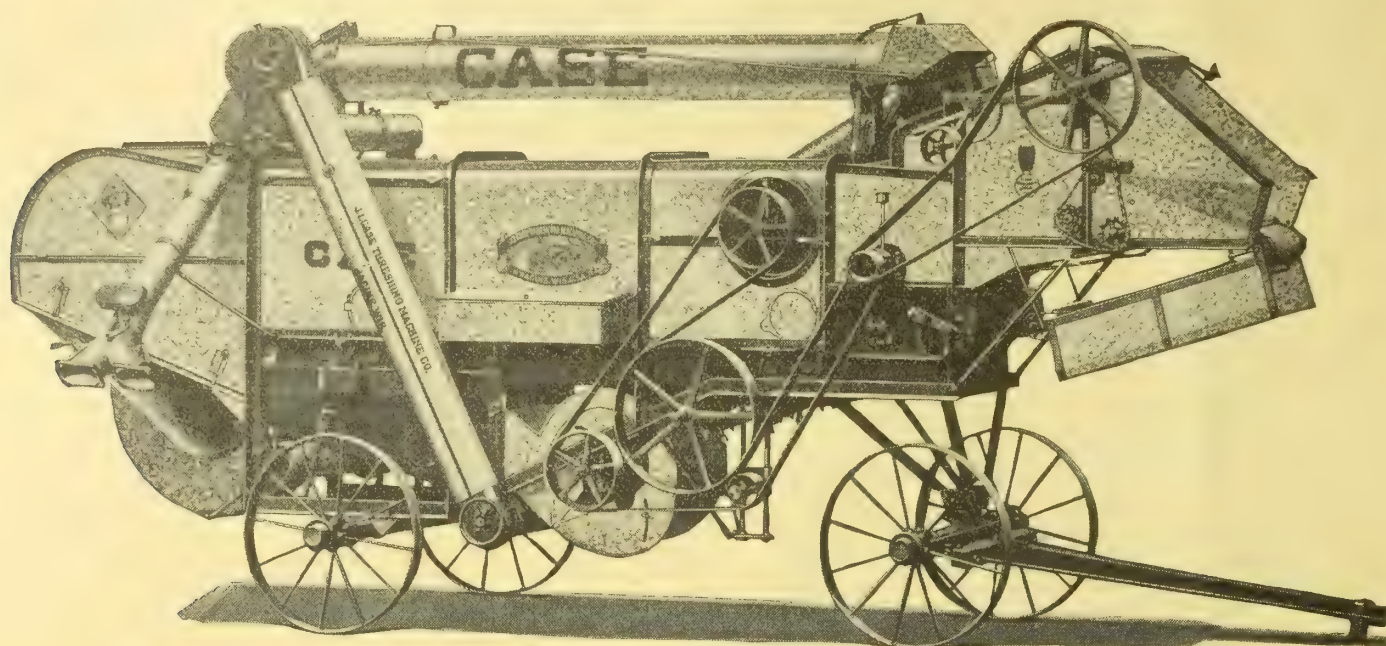
ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, *The Drive Pulley*, has no “cover” to strip. It is ALL pulley, and is thoroughly waterproofed.

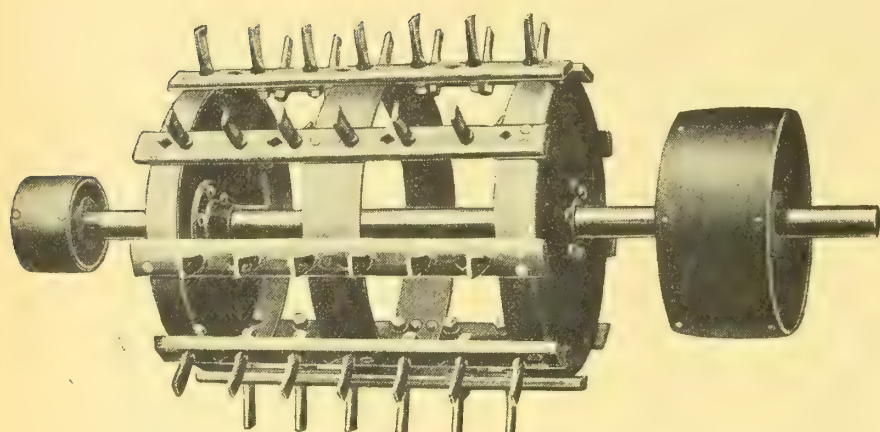
ALL the Power—ALL the Time

ROCKWOOD, PULLEY SERVICE

CASE Galvanized, Steel-built,



Case 9-Bar Cylinder 20x28 Galvanized, Steel-built, Light-weight Thresher.



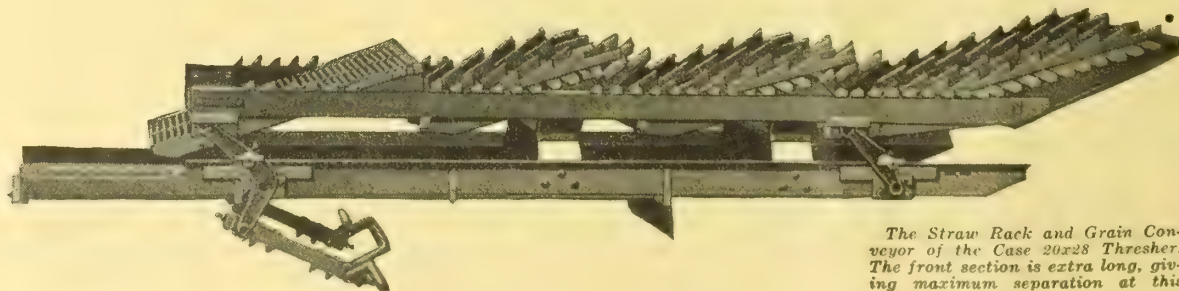
The 9-Bar Cylinder of the Case 20x28 Galvanized, Steel-built, Light-weight Thresher. The bars are riveted to pressed steel heads, and these are riveted to drop-forged steel hubs. Special square-shanked teeth of unusual toughness are furnished for the 9-Bar Cylinder.

AMONG farmers who know—who want the greatest possible profit from the two-plow tractor or the three-plow tractor they use in general farm work—there is a growing demand for Case Galvanized, Steel-built, Light-weight Threshers as shown on these pages. They are built in accordance with the same correct engineering principles embodied in *all* Case Threshers, but have not the great capacity of the larger machines.

For instance, the 20x28 9-Bar Cylinder Case Thresher shown on this page can be driven to capacity, with full equipment of wind-stacker, feeder and grain-handler by a Case 10-18 Kerosene Tractor.

This is pre-eminently the machine for the progressive farmer who wishes to thresh his own grain at his own convenience. It will prove a profitable working mate for the small or medium sized tractor on any fully equipped farm.

On the following page is shown the design and some of the details of the Case Galvanized, Steel-built, Light-weight Threshers of the 12-Bar Cylinder class. This machine is made in two sizes—22x36 and 26x46. Either



The Straw Rack and Grain Conveyor of the Case 20x28 Thresher. The front section is extra long, giving maximum separation at this point.



Look for the EAGLE Our Trade Mark



TRADE MARKS REG. U. S. PAT. OFF.

AND IN FOREIGN COUNTRIES

To avoid confusion, The J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

Light-weight THRESHERS

Can be Driven By the Smaller Sizes of CASE Kerosene Tractors

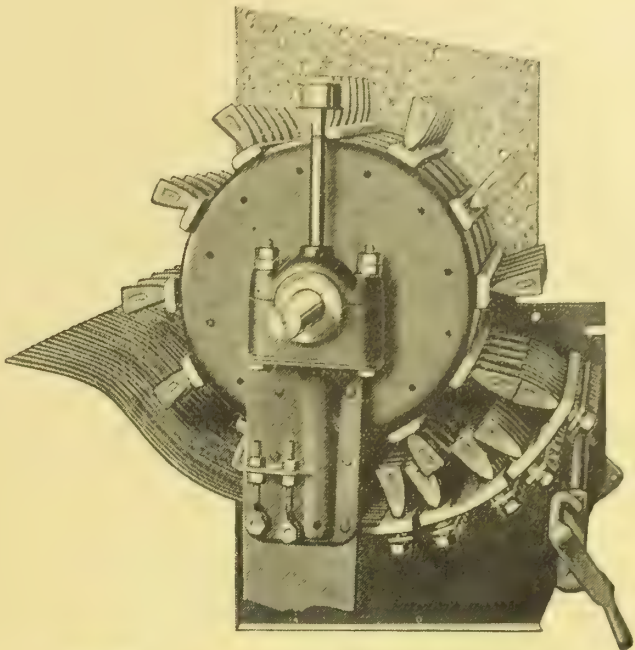
size can be driven with full equipment, by a Case 15-27 Kerosene Tractor, or equal power. These are the sizes suitable for community or neighborhood threshing, or for custom threshing where great capacity is not required.

The machines shown on these pages are the three smaller of the six sizes of Case Galvanized, Steel-built Threshers. The steel construction results in a saving of about 40 per cent in weight as compared with most other threshers of similar capacity.

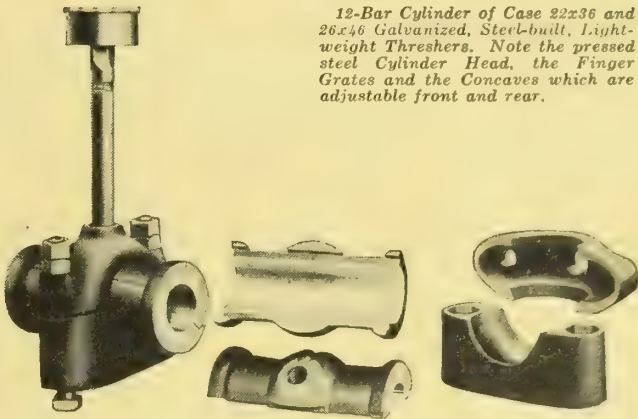
Case Galvanized, Steel-built construction gives rigidity and long life. It prevents total destruction by fire. It avoids distorted frames and disalignment of shafts and bearings from the strain of drive belts. It prevents the rusting, rotting and warping which shortens the life of wooden machines.

Write for catalog of Case Galvanized, Steel-built Threshers and Case Kerosene Tractors suitable for your requirements.

J. I. CASE THRESHING MACHINE CO.
(INCORPORATED)
Dept. DJ-11 Racine, Wis., U. S. A.
Making Superior Farm Machinery Since 1842



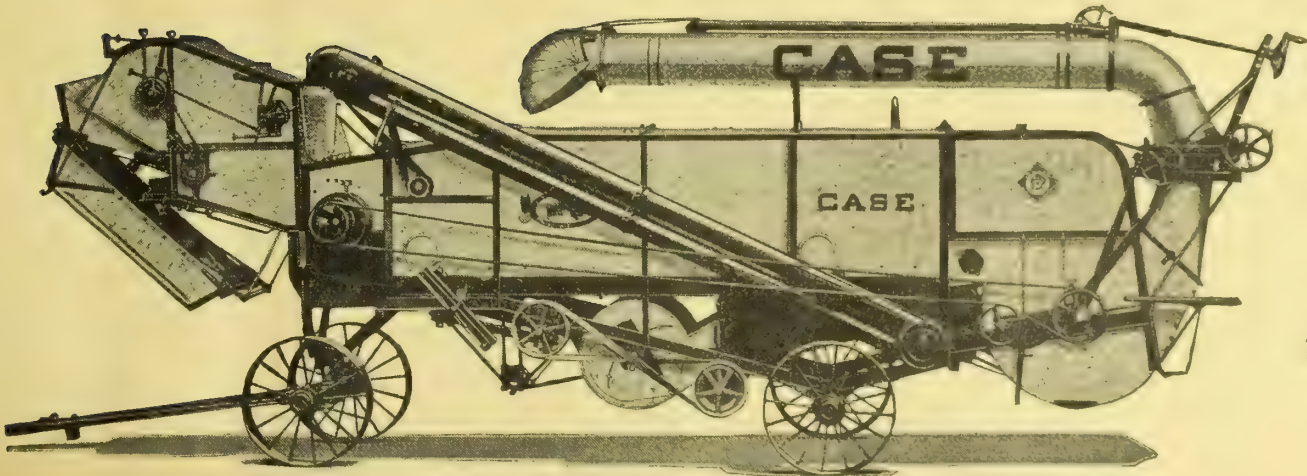
12-Bar Cylinder of Case 22x36 and 26x46 Galvanized, Steel-built, Light-weight Threshers. Note the pressed steel Cylinder Head, the Finger Grates and the Concaves which are adjustable front and rear.



The bearings for Cylinder, Beater, Crank and Fan are of the ball-and-socket, self-aligning type, and all important bearings are lubricated by pressed steel grease cups.

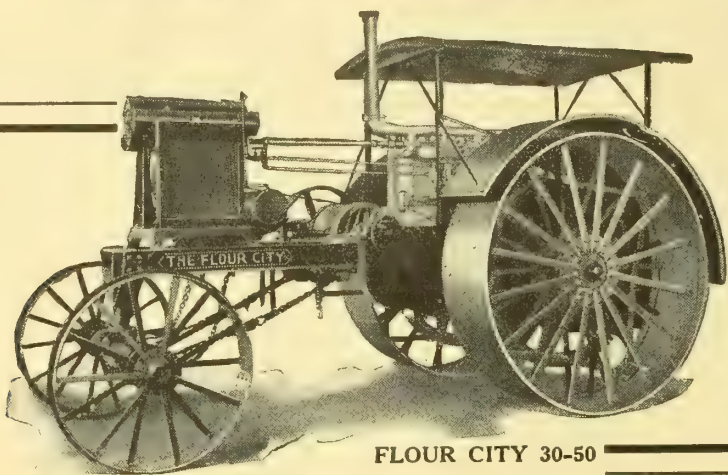


The Straw Rack in the 12-Bar Cylinder Thresher has four Risers, providing efficient separation. In addition, the front section is of liberal dimensions, another factor in thorough separation.



Case 12-Bar Cylinder. Galvanized Steel-built, Light-weight Thresher. Built in two sizes: 22x36 and 26x46.

FLOUR CITY TRACTORS



FLOUR CITY 30-50

There's no danger of getting a size too large or too small when you buy this tractor. Flour City Tractors are built in four sizes—a size for any farm.

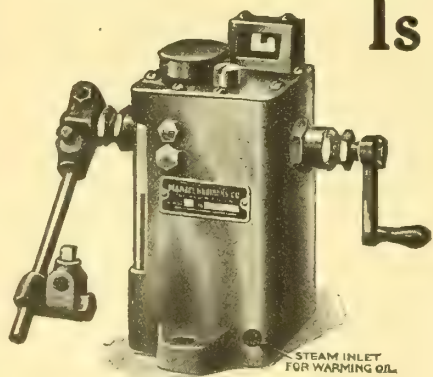
The reliable Flour City valve-in-the-head motor, with which each size is equipped, insures ample power, reliable, lasting service and economical operation.

Write for full information

KINNARD & SONS MFG. CO.
826 44th Ave. No. - - Minneapolis, Minn.

Mention The American Thresherman and Farm Power

An Oil Pump That Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road, in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H. P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.

311-313 Babcock Street

Buffalo, N. Y.

Mention The American Thresherman and Farm Power

Tenants of the Soil

BY ORIN CROOKER

THEOLOGICALS of old used to derive great satisfaction in learned discussions as to how many souls could dance on the point of a needle. We are not quite sure whether this weighty subject was ever settled to the full satisfaction of every one but we do know that this old time discussion has a somewhat similar and far more practical successor in the problem of how many bacteria may hold high carnival on a particle of soil. For in this, perhaps, lies the very heart of successful agriculture. No soil can be reasonably productive without the presence of untold millions of these tiny forms of life in every cubic inch of surface soil. Bacteriologists tell us that cultivated land holds from 10,000,000 to 100,000,000 bacteria to the gram. And a gram is not quite one-thirtieth of an ounce! At this rate there must be enough bacteria on every particle of soil lying within eight or ten inches of the surface to make it impossible for any of them to feel lonesome!

Seriously, however, these one celled plants—for they belong to the plant and not the animal "kingdom"—are of so great importance to the farmer that he should make it his business to get acquainted with their ways of life, including their likes and dislikes. They are his unpaid workers. He may be able to carry on his farm without the aid of hired hands but he couldn't raise a crop of any kind without the help of these microscopic assistants. Let us see, then, what practical assistance there lies within the power of the farmer to give them. Successful soil manipulation is more largely dependent upon the farmer's treatment of these unseen workers than would have been deemed possible a comparatively few years ago.

Bacterial action is inseparable from the processes of decomposition by which organic substances—whether vegetable or animal—are broken down into simpler compounds. The reason meats, eggs and other perishable products can be preserved through refrigeration is, of course, that decomposition is retarded by the checking of bacterial activity brought about by the lowered temperature. Let the temperature be congenial and these forms of life will become active at once and go to work in their own peculiar way. Soil temperature, however, is one thing over which the farmer in the open fields has no control. Consequently, he must confine his actual crop growing processes to that season of the year in which temperature permits activity on the part of the bacteria in the soil. The only way he can do otherwise is to work under glass and with the

aid that steam or hot water pipes can give him in the forcing house. But even supposing that plants would grow in the open in cold weather, a little consideration will reveal that it would not be long before they would exhaust all available plant food in the soil. Then plant growth would be automatically checked for the reason that the bacteria present would be in a dormant state and unable to change any soil constituents which might be present in unavailable form into such other forms that plants could make use of them.

A suitable temperature, therefore, is one essential requisite for successful bacterial operation. But this the farmer must take as he finds it, and govern himself accordingly. Roughly, the higher the temperature—within their life sustaining limits—the more actively do his bacterial helpers work in decomposing the organic substances in the soil and getting them in such condition that growing plants may feed upon them. Consequently, other conditions being right, the more rapidly do plants grow in warm weather.

Moisture is another requisite for bacterial action. Many substances will resist decay for long periods if kept dry. Every farmer knows that the wooden sills for his buildings must be so placed that air can circulate freely about them and thus retard their deterioration. Soil which is too dry will not grow crops successfully because of several reasons. Chief among these is the fact that the activity of bacterial action is retarded. As soils dry out in a drought many bacteria die. The rest simply become dormant and so remain until sufficient moisture at suitable temperature finds its way into the surface earth to awaken them into activity. Now, a farmer is partly dependent on natural precipitation for soil moisture—but not wholly so. He has learned that not only through methods of irrigation and sprinkling can he regulate this condition but that by mulching the soil through constant cultivation he may draw moisture from the sub-soil regions through capillary action just as oil mounts upward in a wick. So he keeps his unseen friends, the soil bacteria, at work quite irrespective of rainfall conditions by proper cultivation and mulching. And in this he is using wisdom not yet the possession of his forefathers who suffered many a disaster in cropping because of ignorance along this line.

The presence of sufficient air is another factor essential to the work of most of the beneficial forms of soil bacteria. They need the free oxygen

of the air for the transformation of certain soil constituents into plant food. One of the important products of oxidation is carbon dioxide, a gas which enters at once into solution in the moisture present in the soil. This gives the soil water great power as a solvent. Many of the minerals present are thus brought into a soluble state in which plants can feed upon them. All this is the result of bacterial action and this, also, is a condition over which the farmer has control through processes of cultivation. A well aerated soil is maintained through proper plowing, disk-ing, harrowing and mulching. If there is lack of aeration because one's soil is water-logged one may remedy this by proper tiling.

Of course, soil bacteria would soon exhaust all food supplies if proper physical conditions for their activity were maintained and no new food were added from time to time. But this is another factor well under the agriculturists' control through proper manuring and fertilizing. The roots of growing crops provide organic matter for bacterial action as do cover and green manure crops when these are plowed under the surface and there left to undergo decay. Commercial fertilizers have their part to play, while certain legumes such as clover and vetch not only add organic matter but also large amounts of nitrogen which they obtain from the air through the work of certain soil bacteria peculiar to their own root systems.

We have seen how temperature, moisture, air and food are all essential in keeping the soil bacteria busy and active. Three of these four factors are under the direct control of the farmer of the open fields. One thing further, however, should be mentioned. This, too the soil tiller can control. It is to keep the soil pleasant for his unpaid workers. Continuous cropping exhausts the alkilinity of most soils and it becomes acid or sour—a condition which is repulsive and indeed fatal to most beneficent soil organisms of the bacteria type. Consequently, the farmer may need to add lime to his fields in order to overcome this. But when this is done in needful instances in addition to the things already specified he has done about all that can be done to make his unseen tenants feel at home and do their best work.

Human Hour Glass

A school teacher was giving his pupils a lesson regarding the circulation of the blood. "If I stand on my head, by way of illustration, the blood rushes to my head, doesn't it?" Nobody contradicted him. "Now," he continued, "when I stand on my feet, why doesn't the blood rush to my feet?" "Because," answered a daring youth, "your feet ain't empty."

The Light All-Steel Power Corn Sheller You Have Wanted



Corn growers who have seen the John Deere No. 3 All-Steel Corn Sheller say that this is the sheller they have been waiting for. An 8 H. P. farm engine or light tractor will run it. The John Deere No. 3 will deliver from 90 to 150 bushels of thoroughly cleaned corn per hour. A crew of from three to four men can operate it to full capacity.

Its steel construction insures a durable, lasting sheller—no warping to cause binding in the bearings—no rotting to cause early replacement of parts. It has all the desirable features that have made Marseilles shellers famous among job shellermen, including the

beater force feed, simplified shelling parts and a thorough cleaning device. It comes to you regularly equipped with force feeder, wagon box elevator, swinging cob stacker, durable mountings and right-angle belt drive.

If greater shelling capacity is desired our John Deere No. 9 Steel Cylinder Sheller makes an ideal outfit. Operated with a 16 H. P. engine or tractor, it will shell from 200 to 350 bushels per hour. We also have 4 and 6-hole spring type shellers, and larger cylinder shellers for job work. Your John Deere dealer will gladly figure with you.

We want to send you free our illustrated booklet that fully illustrates and describes this all steel sheller. Drop a card to John Deere, Moline, Illinois, and ask for Booklet PS52.

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Greater Convenience For You

A gang of RED SEAL Batteries handled as one. Handiest thing in battery lines you ever saw.

Best for Every Farm Use—Farm Engines, Fords, Trucks, Tractors, Bells, Blasting, etc.

RED SEAL SPARKER

Ask Your Dealer. "The Guarantee Protects You"

MANHATTAN ELECTRICAL SUPPLY CO., Inc.

New York Chicago St. Louis San Francisco

Factories: Jersey City—St. Louis—Ravenna, Ohio

STANDARD UNDERWOODS

5-year Guarantee

Yes, a genuine Standard Visible Writing Underwood, newly rebuilt, yours for \$5.00 down and then easy monthly payments, at much less than factory price. Write for free trial offer 111

TYPEWRITER EMPORIUM

Montrose & Ravenswood CHICAGO

Limestone Pulverizers

Sold direct from Factory to Farmer

Write for catalog

O. B. Wise Pulverizer Co.

Knoxville, Tenn.

Semi Cord Tires 8000 MILE SERVICE 66% SAVING—FREE TUBES

Most modern and lasting of reconstructed tires. Semi Cords are reinforced with Standard Cord tops as shown in picture. Their tough cross strands of cord, woven into and under a heavy, perfectly cured rubber tread, give the greatest wearing quality of any other grade of tires. These are sold by us only and our usual mileage guarantee given. As an extra inducement to try them we include one new Standard Make tube free with every tire. Buy now at these low prices. Written guarantee with each tire.

30x3	\$ 7.50	32x4	\$12.20	34x4 1/2	\$14.55
30x3 1/2	9.10	33x4	12.50	35x4 1/2	14.90
32x3 1/2 S.S. only	10.20	34x4	12.85	36x4 1/2	15.50
31x4	11.90	32x4 1/2	13.40	35x5	16.45
30x3 in Fabric only		33x4 1/2	13.95	37x5	17.50

Send \$2.00 deposit for each tire ordered, balance C. O. D. subject to examination. If full amount sent with order, deduct 5%.

SEMI CORD TIRE CO. 20-A Roosevelt & Robey St., Chicago, Ill.



For over half a century the Joliet Manufacturing Company has made nothing but Corn Shellers—the largest plant of its kind in the world. You make no mistake in buying a JOLIET. There's a size for any farm, large or small. Combines more superior power-saving, time-saving and efficient shelling improvements than any other machine. The only cylinder sheller with beaters warranted for 5 years. *Farmers get higher prices at elevators for corn shelled with a Joliet, because it is shelled right.*

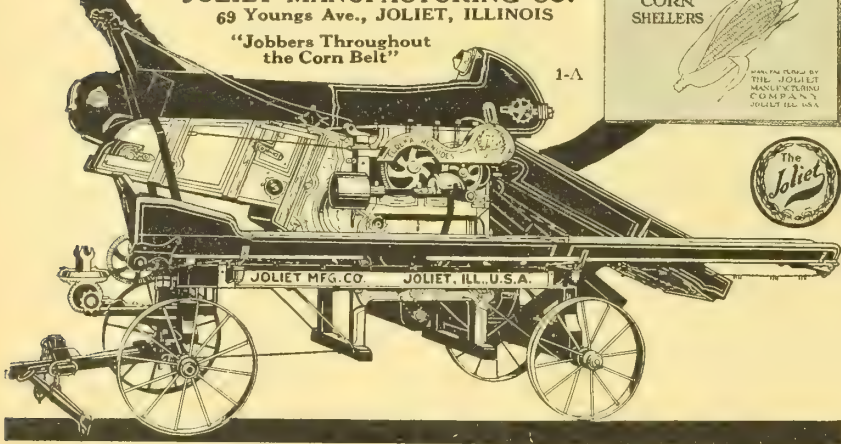
The JOLIET, Famous Wherever Corn Grows

Any Corn Belt farmer can save money shelling his own corn and make big profits shelling for his neighbors. Have your own JOLIET and be ready to shell and market your corn whenever roads and markets are good. The JOLIET, simplest and strongest of all Shellers, will give you no trouble. Any 8-16 Tractor runs a 6-hole spring or No. 1 cylinder "Joliet." Guaranteed to run light, work fast and thoroly. A size for your particular needs to shell either shucked or unshucked corn.

Write for particulars and our big illustrated catalogue. Give name of your nearest dealer.

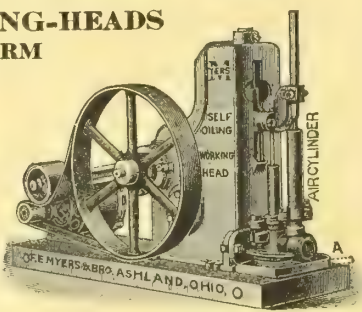
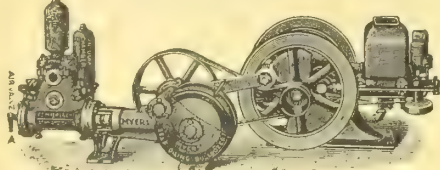
Attractive terms to dealers in unoccupied territory. Write.

JOLIET MANUFACTURING CO.
69 Youngs Ave., JOLIET, ILLINOIS
"Jobbers Throughout the Corn Belt"



MYERS SELF-OILING POWER

POWER PUMPS AND WORKING-HEADS
IDEAL FOR HOME AND FARM



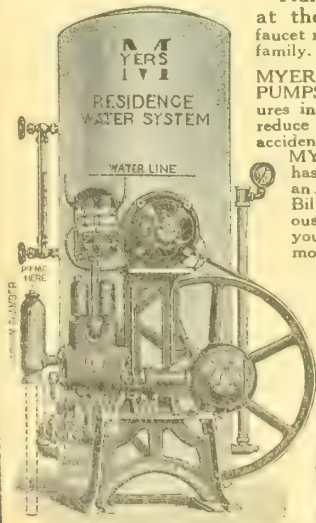
EVERYONE is interested in modern water conveniences for home and farm

—Running water at the turn of a faucet means less labor, more leisure, greater comfort for the entire family.

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Learn Gas Traction Engineering while you are working and earning money. We'll teach you by mail while you are working and earning money. Send for catalog. Address

CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

Correspondence

I am sending you a picture of our outfit, which consists of a 40-inch Russell separator and a 26-horse power Advance engine. This outfit has run for seven years and is good for quite a few years yet. I believe this is as good a combination for threshing as can be gotten. Very few

ly. I never made much out of my first machine.

The next machine I bought I run a little bit differently. Every two years, and sometimes every year, I take the blower off and then take out all the straw-racks, grain pan, beaters and everything inside the machine



Used for Seven Years and Running Fine, Is the Record of This Rig Owned by Charles E. Gilliland & Son, Clinton, Waubay, South Dakota.

small machines are being bought around here, which shows that the big machines are still in favor.

I am sending you a picture of our outfit which I hope to see in your valuable paper.

CHAS. E. GILLILAND AND SON.
Waubay, S. D.

I own a new Peerless outfit, which does good work. I have threshed for twelve years and my best run was in 1919. We threshed eleven hundred bushels of oats in six hours. We thresh oats, rye, millet, peas and beans.

We have very steep hills in this country, but I always manage to pull over them. I like your paper very much and am always on the lookout for it. C. H. SMITH.

McMinnville, Tenn.

I have been in the threshing business about fifteen years and I do not claim to be an expert or know-it-all yet, but I try to use common every-day sense and judgment. Like many others, I thought a machine would run forever without any work being done on it or any repairs being bought for it, but I learned different-

that I can get out. I then tighten it up inside and give it a good coat of paint, and if any part is weak or looks as though it would not stand a season's run, it should be replaced while the machine is apart and there is a good chance to get at it. You can not do much with the inside of a separator unless you "take it down," and the inside is what you want to know is right. The outside you can get at at any time. I always examine all boxes and rebabbitt those that might need it, replace all worn sprocket chains and sprocket wheels, keep my belts well oiled and in good repair, and use the best oil I can get. When this is done, one is not liable to have any great amount of trouble during his run. Of course, we go over our machine twice a day, morning and noon, to see that everything is in good shape.

The same rule applies to the engine and tank. Of course, the engine does not have to be taken apart, but it should be kept in as good repair as possible. I have a machine that I have run six falls and it looks good to me for six more.

Not long ago it was my good fortune to spend a day with Sile. I was



John Schafer, Hoven, South Dakota, Gets About Forty Days of This Every Year.

Extra: "You tell 'em splinter,
you're a chip off the old block!!"

Chicago,
Wednesday.

OLD PAL PETE:

This is a P. S. to the letter I wrote you on the buzzing Limited. Kid, for a fact, I'm hitting 13 on making up Camel advertisements. And, I'll say it right here! Porter, give us the lights!

Just skimmed another swell Camel fact! Stop this: Guess I've smoked a million Camels! Pete, they never tired my taste yet!!!! And, old socks, *put Camels to the test!* Then you'll wise up that Camels leave no unpleasant cigaretty aftertaste nor unpleasant cigaretty odor!

That's some smoke news, I'll say, when you been trying to fuss the "straight" brands! And, old shoe, *you ought to know*, they gave you a lacing!

What makes a dent on my disposition is that while Camels are the mildest cigarette and the mellowest cigarette any man can buy they've got all the "body" you ever heard tell of!

Why Pete, I've got as many new selling ideas about Camels as there are hairs on a purr-kitty's tail!

Drop your old lamps down here,—how's that for blazing the joy Camels pass out!

Me for more of 'em

Shorty.

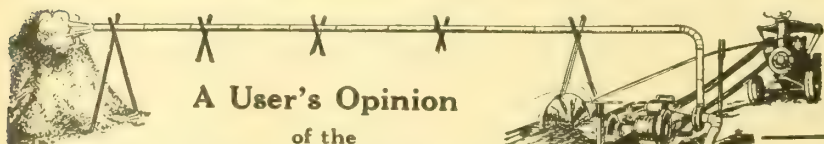
—"The Camel Kid!"

Camel

Mention The American Thresherman and Farm Power



Mention The American Thresherman and Farm Power



A User's Opinion
of the

CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower, as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs.

Yours for business,
C. S. LONG, New English, Iowa, R. D. No. 1, Box 40.

The letter explains itself. This man's blower has worked unflinching for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO

Mention The American Thresherman and Farm Power

Practical Farm Loans

BY R. G. KIRBY

THE large amount of discussion concerning farm loans might lead the average city resident to think that most of the farmers were spending all of their time trying to borrow money. It is true that farmers in some districts are paying too much for their loans and all that can be done to remedy this situation will benefit the farming business. However, there are many farmers living in districts where loans can be obtained at a fair rate of interest and their problem is not how to obtain money but how to use it in a profitable manner after it is obtained.

Whether a loan of one thousand dollars is drawing five per cent or six per cent interest is not as important as how the principal is to be paid back from the earnings of the farm. Of course the difference of one per cent is worth considering but it is not as important as the one thousand dollars which must be earned on the farm and paid back at stated date.

Farm loans should be made for some project, such as the purchase of land or equipment, which will increase the earning power of the farmer. Loans of this type are safe. A farmer might borrow several thousand dollars and use it for such investments as improvement of the home, an automobile or travelling

expenses. If his property could stand such expenditures the loan would be safe but if such investment would mean a heavy mortgage they might cause too much worry and prove a detriment to the farmer and his business. Home improvement is generally profitable and the automobile has become almost a necessity on many farms, but every farmer must decide whether his business warrants such investments on borrowed capital. In general every farmer must use his own judgment in solving financial problems. Some farmers try to get along without enough capital when borrowed money would start them toward great success. Others borrow too much money and find themselves in a mesh of debt which takes away a lot of the joy of living, especially if they are of the type that worries about financial obligations every day of the week. It pays to borrow money for many farm improvements but such loans have to be paid some day. The farmer should ask himself, "What arrangement shall I make for paying the principal, how can my farm be made to earn the loan and how much better off will I be when the loan is paid?" Then every good farmer can determine how much borrowed money he can use to advantage.

Avoiding Fire on the Farm

BY W. H. UNDERWOOD

RECENTLY fire destroyed a neighbor's machine shed in which was stored a nearly new tractor, binder, mower, and other machinery. There was no insurance on the building or the contents. The loss amounted to several hundred dollars. Every year millions of dollars' worth of farm property is burned, a large portion of which is a total loss to its owners because not fully covered by insurance. There are many inexpensive and effective ways by which such loss can be avoided, first by avoiding the conditions which are apt to cause fires and then by having good fire fighting equipment always in readiness for the emergency.

If "Eternal vigilance is the price of liberty," it is also the price of safety from fire and he who is neglectful therein must eventually pay the greater price of disaster. That careful attention to the prevention of fires would result in reducing the number of fires on farms is self-evident but nevertheless there is a tendency by the farmer to be careless about the prevention of fires by failing to do away with all possible fire

hazards on his premises and providing fire extinguishing facilities as conditions require for the protection of his property. The cost of fire preventive and fire extinguishing facilities will in the long run be much less than by the loss by fire in excess of insurance, to say nothing of the inconvenience of the lack of the use of the buildings while others are being built.

There are many different causes from which destructive fires originate, gasoline, kerosene, carelessness with matches, defective chimneys, etc. Gasoline is very dangerous. Even when cold it emits a very explosive vapor and the best plan to keep the supply that is necessary is a metal tank buried in the ground. It should never be kept where it is necessary to take an open light as the vapor from a single pint will render the air of the room explosive. Water on burning gasoline, except in large quantities, will only spread the fire which makes it all the more dangerous; the flames can, however, be smothered with dry dirt or ashes.

Danger of fire from kerosene oil is very great. Lamps with glass bodies

are liable to be broken with serious results, while those with metal bodies are far safer, though all kerosene lamps and lanterns are liable to explode if the oil in them gets too low or if not carefully handled. If a lamp or lantern is refilled while still hot and the wick is loose in its burner, enough vapor may be generated to produce an explosion, consequently the wick should fit tightly. Refilling should never be done near an open blaze or a hot stove. I like the electric lantern better than any other kind, it is always safe.

All matches except those which will not light unless they are scratched upon the box which contains them are dangerous. Ordinary matches take fire at a very low temperature and often ignite spontaneously. Sometimes they fall upon the floor and are lighted noiselessly by being stepped on and are unnoticed. Also frequently when one is scratched the lighted head is broken off and starts a fire. Many other fires are started by matches thrown down while they are still burning. Tobacco smoking and carelessness with matches in buildings and near stacks of hay or grain cause many fires and should never be allowed. One should never carry matches loose in his pocket but in a metal matchsafe so they will not be pulled from the pocket accidentally.

Defective chimney flues in houses and overheated stoves are always dangerous. If stoves are improperly put up or carelessly used they are a constant menace. Stovepipes passing through wooden partitions should always be well insulated. If there are cracks in the chimney they should be filled with plaster or cement. No chimney that is not cleaned often is entirely safe, for the reason that nearly all frame buildings are roofed with wooden shingles which are easily set on fire by sparks or flakes or burning soot. One way to lessen this danger is to paint the roof, which not only prevents the shingles from warping but forms a sort of metallic surface which will not easily ignite.

Fires to destroy rubbish and brush often cause fires in buildings and hay and grain fields from sparks blown from them by the wind. It is never safe to leave such fires unwatched until their embers are dead. A number of small fires to get rid of rubbish are much less dangerous than a single large fire as they will burn out quickly and a little water will put out all sparks in the ashes which otherwise may be blown about by the wind and carried into inflammable material.

Lightning is also a great fire danger and the only protection from it is lightning rods which, if properly installed, reduce the probability of destruction of a building ninety-five per cent. Where buildings are properly rodged many farm fire insur-



Prices of lumber are so high that many badly needed farm improvements have been put off. Yet there are tens of thousands of feet of high-grade lumber standing in your wood lot and those about you. And all that is needed is an "American" Portable Saw Mill, driven by your tractor, to get this lumber out at small expense and into the market at a good profit. You will find a ready local market for the lumber you turn out. Add one of these speedy "Americans" to your machine equipment, and its earnings will soon pay for it—then pile up as good dividends on your tractor and mill outfit.

"AMERICAN" ^{Portable} Saw Mills

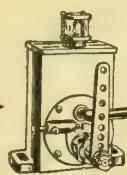
Have been on the market for years and are known the country over as *the standard farm saw mill*. They are simple, rugged, reliable, and do a tremendous amount of work with little power. For instance—an 8 H. P. engine or tractor will drive an "American" Mill that will easily turn out 2500 feet of first class lumber per day. And there are larger sizes, if you have the power for them, with bigger capacity. No skill or experience is needed to operate an "American." Any man that's mechanic enough to run a tractor can run an "American" with a big profit. A farm tractor driving an "American" Saw Mill will make the winter months harvest months. Now is the time to place your order, to get quick delivery and be ready for business. Write for the "American" Catalog today.

Dealers—here's an opportunity for you to make fall and winter machine sales. Write us for full particulars.

American Saw Mill Machinery Company

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NEW YORK CITY, N. Y.
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PRACTICAL SIGHT-FEED OIL PUMP

Soon pays for itself in the amount of oil it saves.

It has no ratchet wheel or pawls, and does not feed the oil by "spurts," but a certain amount of oil is fed with every revolution of the engine. Take out your watch—count the drops—set it to feed any number of drops per minute—the pump obeys your instructions.

Every Pump Guaranteed

Get it from your supply house or wire at our expense and we'll ship by Parcel Post C. O. D.

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McCullough Manufacturing Co.
Minneapolis Minnesota

"NOW-A-DAYS"

says the Good Judge



A man can get a heap more satisfaction from a small chew of this class of tobacco, than he ever could get from a big chew of the old kind.

He finds it costs less, too. The good tobacco taste lasts so much longer he doesn't need to have a fresh chew nearly as often.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco

RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

THE LEADING THRESHER MANUFACTURERS OF THE UNITED STATES AND CANADA USE -



HART BELT AND BUCKET WEIGHER
(CODE - DAPHNE)

One of 12 styles suitable for large separators.

A light weight, yet strong, compact steel feeder for small separators.



LANGDON IDEAL SELF FEEDER

THE BETTER FEEDER
Dependable because perfectly governed. For large size separators.

THE HART JR. LINE
comprises 5 different models, all especially designed for Junior Separators and adapted to territorial conditions and requirements.



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**AS STANDARD EQUIPMENT
BE SURE YOUR SEPARATOR IS HART EQUIPPED**
OVER 30 DIFFERENT STYLES OF WEIGHERS AND SELF FEEDERS FOR LARGE AND SMALL SEPARATORS
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GRAIN HANDLING MACHINERY SINCE 1889



LANGDON JR. SELF FEEDER



HART JR. WEIGHER
(CODE - HARSING)

Mention The American Thresherman and Farm Power

ance companies make reductions on the premiums charged, which will soon pay the cost of their installation.

In all buildings some kind of fire extinguishing apparatus should be kept, conveniently placed and always kept ready for instant use and a good ladder outside on which the roof may be reached if necessary. The importance of this precaution is emphasized by the fact that fire insurance companies give special rates on property that is equipped with good fire extinguishing apparatus.

One of the simplest and cheapest fire extinguishers is the fire bucket which is found in all places of business and factories and also in buildings of many well equipped farms. They are kept in fixed places to be used for fire only and but little work is required to keep them constantly filled with water. Pumps to furnish water are relied on by many people to put out fires but unless the well is close the delay caused by pumping and carrying water may allow the flames to spread beyond control.

The usefulness of the fire bucket largely depends upon its being full of water and right where needed before the fire has spread to any extent and therefore the buckets should never be used for any other purpose. They should be examined and re-filled with water at regular intervals and to prevent the water in them from freezing they should be covered

and about two pounds of common salt added to the water in each bucket. Where the water supply is not near, barrels or other receptacles filled with water should be available for use with the buckets.

A system of water supply under pressure through hose attached to a suction and force pump at a well or pond and kept ready for instant use is excellent in connection with the water buckets and the security thus afforded is well worth the expense of installation.

One of the merits of chemical fire extinguishers is that they cannot be used for anything else and therefore are sure to be in place ready for use when needed, also that they will extinguish fires among oils where water will not do so.

Sand is a good extinguisher of burning oil if the fire is on or in a shallow container but it is not very effective if the fire is in a tank or bucket as the sand will sink to the bottom and the oil continue to burn.

Sawdust is also a good fire extinguisher if mixed with common soda, two or three pounds to the bucketful of sawdust, which renders it non-combustible and when thrown upon a hot fire produces a gas which smothers the flames.

If the price of paper goes any higher, they are going to make shoes out of leather again.

Take Care of Belt Stretch

BY W. F. SCHAPHORST

Vertical belts give more trouble than others, because of the fact that as soon as the belt stretches, contact with the lower pulley is lost, and power will not be transmitted.

In the horizontal drive, stretch is easy to take care of, provided the belt is kept nice and soft and pliable with a treatment that penetrates, surrounds and lubricates every tiny fiber. It then becomes unnecessary to take up horizontal drive at all. Many drives are in daily use which have not been taken up for eighteen years or more, and then they were taken up only because the belt became so slack that the slack side touched the tight side. Extreme slackness is as impractical as extreme tightness.

Where vertical drives are used, it is obviously impractical to permit slack running because it is necessary to continually take up the belt stretch as the stretch occurs. One successful and economical method that has been brought to the writer's attention to constantly keep vertical drives in pulling condition is to have a number of "fillers" or "inserts" in stock, already punched to match and ready for insertion and lacing. Thus, for example, when a belt is put on new, it is cut short by an amount depending upon the distance between

the shaft centers. The belt man uses his judgment as to what this short cut should be. Let us say that he desires to make it seven inches. He then selects a filler seven inches long, of the same width as the new belt, and laces it into place, either with rawhide or wire lacing.

In a short time the belt will stretch and will need taking up. The belt man then simply removes the seven-inch filler and replaces it with a six-inch filler. After another week, say, he replaces the six-inch filler with a five-inch filler, and so on until all of the stretch, or most of it, is taken out of the belt.

The fillers can be kept in stock and used repeatedly. In this way there is no loss of belting material due to taking up, nor is any time lost due to the punching of new holes, as they are already punched in the fillers.

The writer does not recommend this filler method for horizontal or sloping drive, because he is a believer in the slack drive, which gives maximum are of contact between belt and pulley, least bearing friction and highest efficiency.

They had just become engaged.

"I shall love," she cooed, "to share all your griefs and troubles."
"But, darling," he purred, "I have none."

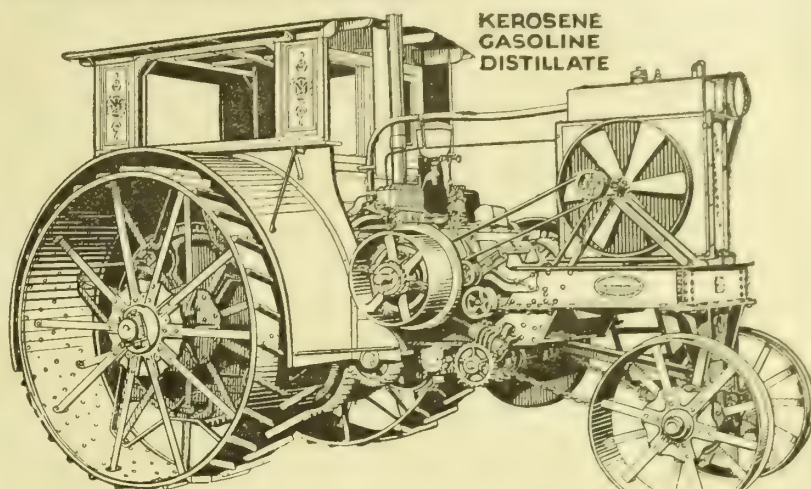
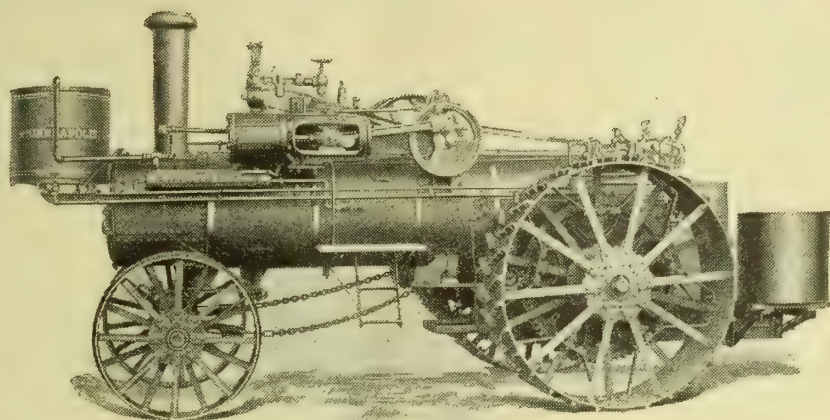
"No," she agreed; "but I mean when we are married."—Dallas News.



"The Great Minneapolis Line"



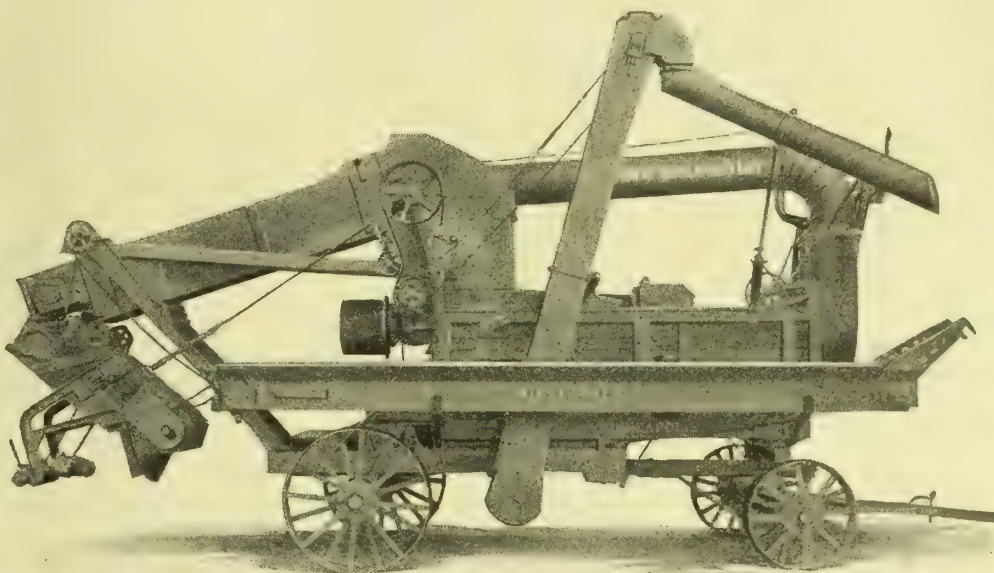
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For all kinds of traction or belt work you will find Minneapolis Gas and Steam Power

Reliable Efficient Economical Durable

**More Work
Better Work
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than any Sheller
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size made in the
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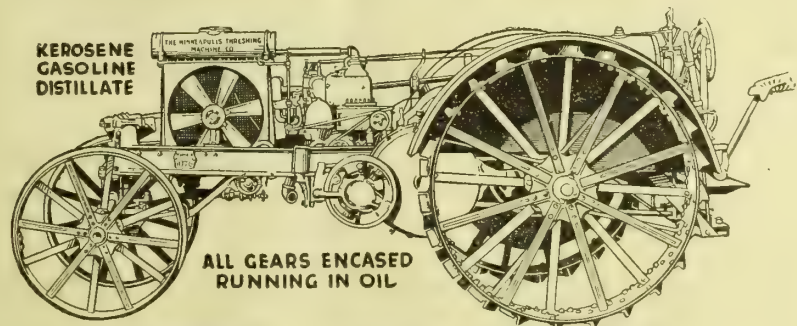


Ask
Any
Owner

Read
Our
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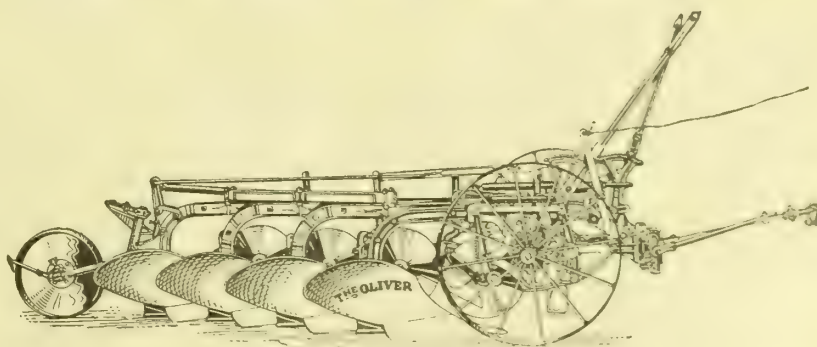
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ALL PURPOSE FARM TRACTOR



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Seeds grow faster and mature into healthy grain when first freed from smuts by using *Formaldehyde*. This powerful disinfectant also destroys all grain rust and fungus growth.

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THIS BOOK TELLS HOW
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Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures crops, especially POTATOES.

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The Morris Improved Beading Tool

Be sure to give size of flues when writing for circular.

This tool enables a man who never had any previous experience to put new flues in a boiler, or repair old ones, and do a better job than an experienced boiler-maker can do in the old way.

Easy to Operate

Simply work the handle back and forth, and the tool automatically does a perfect job. Every lick is just the same as every other one. Works in corners same as anywhere else. All straight work.

Thickens Flue in the Sheet

The same blow that beads the flue expands it. Thus the flue is thickened in the sheet as shown in the picture to the right. Never roll old flues. It makes them thin. Note picture to left. Use a Morris Beading Tool.

Wallace Mfg. Co., Kansas City, Mo.

How I Made Threshing Pay

(Continued from page 7.)

wrote down a new entry in my books.

Many weeks before wheat-cutting season rolled around, my wife got a little ledger and began to make some entries. I knew little about book-keeping. I had always hated writing letters, or figuring, so I let her attend to it. Before long, she showed me the first page of her ledger. It read:

Dr.	(my name)	Capital	Cr.
1916		1916 Jan. 1	4000. 00

On the next page I found the following account. Several items in it caught my eye immediately and I hastened to read it in detail.

Dr.	Machinery	Cr.
1916 Jan. 1	Separator 1000. Engine 2500. Belting, etc. 100. Wagon and tank 100.	1916 Feb. 2 Inventory 1850. Profit and loss 1850.
	3700.	3700.
Mch. 1	Inventory 1850.	

At this point I broke out with some warmth. "What d'ye mean, \$1850 profit and loss? We ain't lost no \$1850 on our machinery. I got all I started with." My wife hastened to calm me, after first reminding me that in my excitement I was forgetting all she had told me about grammar.

"Listen, Ed. Your machines, even with your good care, can't last much more than ten years. If you tried to sell them now, after five years' use, you would have to sell for about half what your outfit cost you. You can't shoulder that loss. It's a business loss and ought to be charged to this work of yours—the threshing business."

With that remark, she turned to a page that started:

Dr.	Profit and Loss	Cr.	
1916 Mch. 1	Machinery 1850. 00	1916	

Then she turned over some more leaves of the ledger, talking all the while. "I haven't had time to close all these accounts, so you can get a decent starting-point for this year's business. But I'll do that soon. You must have a cash account. Every business has. Until we get that, I can hardly keep these other accounts straight."

By this time I was getting interested. I'll not bother you fellows, who may read this, with a list of all the accounts that Hon used in her

ledger. No doubt most threshermen have some sort of ledger of their own; but I had never paid any attention to these things, and it was all new and fascinating to me.

It rather stunned me, too. Instead of having \$3700 worth of machines, as I fondly supposed, I had \$1850 to show. The book said so. As I looked at my loved machines, I reflected

sadly that they had done me an injustice.

Working along the lines laid down by my book-keeper, I found that, to

make expenses the coming threshing season, I would have to charge enough to cover not only the labor and fuel costs, plus expenses, but these amounts in addition:

Labor, repairing machines..	\$ 45.00
Selling expenses.....	18.00
Depreciation.....	370.00
Repairs, paint, etc.....	22.75
New belt.....	44.00
Total.....	\$499.75

There were some expenses that I did not include, as I found by later experience. But here was a big sum that I had almost overlooked.

In my extremity, I didn't tell the whole world about these items, but I did make visits to the four custom threshermen who lived within six miles of my place. I took my little ledger and my labor book; and I almost wished I had my wife along!

I got several kinds of receptions. One man frankly disbelieved that it was necessary to figure in all these items. The fact that, until a few months before, I had felt the same way, didn't budge this chap an inch. The other three, while not at first enthusiastic about the matter, gradually came to my way of thinking. They all agreed to do some figuring and to meet me at a Grange meeting, some days later.

At this meeting, we four got together. My skeptical friend hap-

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Tower Bldg., Chicago, Ill. 625 F St., Washington, D. C.
Hobart Bldg., 582 Market Street, San Francisco, Cal.

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Prices Include Tubes and Tires

30x3	\$7.00	34x4	\$11.25
30x3 1/2	8.25	34x4 1/2	12.50
32x3 1/2	9.00	35x4 1/2	13.00
31x4	10.00	36x4 1/2	13.50
32x4	10.50	35x5	14.25
33x4	11.00	37x5	14.50

Reliner FREE With Every Tire

Send \$2.00 deposit for each tire ordered, balance C. O. D., subject to examination. 5 per cent special discount if full amount is sent with order. State whether S. S., Cl., Plain Tread or Non-Skid—all same price.

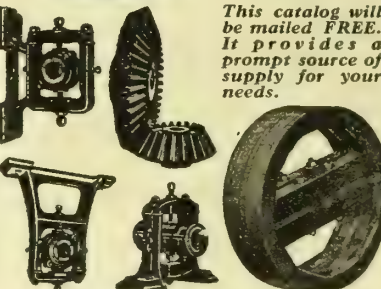
CLIFTON TIRE CO., CHICAGO, ILL.

POWER TRANSMISSION

Our No. 77 Catalog shows a full line of power transmission — **BELTING, PULLEYS, SPROCKETS, HANGERS, BEARINGS, CONVEYORS, ELEVATORS, CUPS, Etc.** — also a complete line of **THRESHER SUPPLIES** at money saving prices.



This catalog will be mailed FREE. It provides a prompt source of supply for your needs.



B.F. GUMP & CO.
Established 1872 Incorporated 1901
431-439 So. Clinton St. CHICAGO, ILL.

BOWSHER'S HEAVY-DUTY GRINDERS



Foremost Among Better Grinders

Crush and grind all the grains that grow. Fine for hogs or moderately coarse for cattle feeding.

Strength, durability and service radiate from every line of these masterful mills. Simple but effective in adjustment. A strictly high grade piece of machinery for the farmer or miller.

Well suited for use with all reliable tractors. Will stand more than rated power without fear of strain, vibration or injury to the mill of any sort.

Light Running—Long Life—Extra Capacity Cone-Shaped Grinders

It pays well to investigate. 10 sizes—2 to 25 H. P. or more. Write today for FREE catalog.

The A. N. P. Bowsher Co.
South Bend, Indiana

ened to be present, and later he joined us. We struck a rough schedule of our coming season's run, what we could hope to thresh, what our men would cost us, included the pay for ourselves and this overhead that I was by now sure was necessary—and from these figures we found that we'd have to charge, on an average, two cents more per bushel than in the past.

Of course, when our action became known, our old customers let out an awful yell. Nearly every big farmer in my neighborhood threatened to buy a rig and enter the threshing game. Thinking to make them "put up or shut up," I went to several and offered to sell my rig, as it stood, for \$2500 cash. That was less than they could get a similar rig for, elsewhere. I had no takers.

I had a regular string of threshermen visitors at my place, as harvest season drew near. They came from all over the county. Nearly all of them left my place with sympathy for my point of view. Some of them had already agreed to thresh for a fixed price, so there was nothing, in all decency, that they could do about changing that.

I had thought, beforehand, of how my customers might claim I was backing out of an agreement. I had said my rates might be enough more to cover the unforeseen expenses. While thinking of my side of it, I was not forgetting their side, either.

This led me to another line of thought. If I didn't know what my threshing cost me, how did they know what their wheat-growing cost them? In order to help them forget their temporary annoyance at me, I went to some trouble, in my own case, to find out what it cost to grow wheat and oats.

In this article, I can't go into detail on the matter of wheat costs. It is enough to say that, while my grain undoubtedly brought in money, I had done a lot of mighty cheap work in growing it. The one big difference, after finding what my grain costs were, was that I couldn't set a price on it sufficient to cover all expenses and show a just profit. In threshing wheat, I could set my price. In selling it, I had to sell at the market price.

My neighbors began to look on me as a coming champion of the farmers. Instead of grouching at me for charging enough to get an even break for my machinery and my labor, they began to wonder if we couldn't figure out some way to cure this rotten system of having a bunch of grain speculators set the price at which we had to sell.

Now I didn't start out to write a history of my life, or how I went up and down, down and up again, in the threshing game. I started to tell what this article says—how I made threshing show a profit instead of a

loss, (for it undoubtedly did show a loss during the first four years of my threshing experience).

Before closing, I want to give in brief the rules which I now follow:

1. Make an estimate of how long you can run each year. Less than thirty days is apt to be too short to cover the actual overhead and still make a fair price to your customers.
2. Figure out what your labor, fuel and other daily expenses will total. Don't forget your state may require liability insurance.
3. Make sure of your help and the wages they will ask.
4. Include all preliminary machine work done by you, with trips to get equipment, and pay yourself a fair price.
5. Ascertain your selling costs. There are selling costs in every business. You may do some favor to get business, or make necessary calls. Charge these to your business.
6. Keep an accurate record of repairs, paint, belting, etc.
7. Strike an average of lost time for the three prior seasons (at least) and include them in costs. You paid for them.
8. Figure depreciation on a basis on the number of years an outfit similar to yours has lasted for some careful thresherman of your acquaintance; lop off at least two years, then divide the original cost of your separator, engine or tractor, and other equipment, by the number of years remaining. Your machine may last two years less than his did.
9. To all labor, fuel, up-keep and lost-time costs, add your depreciation and interest on your money.
10. Add ten per cent of this amount by multiplying the amount by 1.10. For all this labor you surely deserve something.

Since I got lined out right on this threshing game, I find I look on my threshing business much as a merchant looks at his trade—perhaps more like a manufacturer. I know I'm charging not only no more, but no less, than I should. My neighborhood life and my family life has been more pleasant. During the past two years, with prices in some lines sky-high, I've raised my rates less in proportion than ordinary farm labor, which I employ, or implement manufacturers, who make the goods I use.

I'm in threshing to stay, as long as my customers want me. I sell threshing as a salesman sells goods, knowing what it costs and what it's worth. I like it better than I did five or six years ago, because I know it's paying me profits. But now I don't say I like it because of the visiting around, or because I like to tinker with machinery.

If any custom man has had my experience, I'd like to have him write his experience to the editors who who have promised to keep my name in this matter secret.

THE GRAIN LOOKED AS THOUGH IT HAD BEEN RECLEANED

I think the Wood Bros. is the best equipped separator throughout I ever saw, and the farmers for whom we threshed were more than pleased. And the elevators, mills and buyers all said the grain looked as though it had been re-cleaned. I am glad to say that my straw ricks are not green with growing wheat.

Without a doubt this is the cleanest, smoothest and most silent machine I ever ran. You can stand at the end of the rick, not behind it, and you can only hear the straw coming out the blower pipe—and dust!—you don't know what it is!

Another beauty, when you finish threshing you can turn the hose on the machine and the oil and grease all comes off. When we pulled into the shed it looked like it did when we unloaded it off the car.

Yours truly,
W. O. Rigney, Hannibal, Mo.

A Combination of 100% Service and Speed

That's what you want, isn't it? A thresher that puts more grain in the sack—less in the stack—and all done in the least possible time.

Every individual part built to stand hard knocks and give long wear.

All steel construction combined with simplicity—fewer belts—fewer parts—strength—all mean fewer breakdowns and repairs. Handles unusual and difficult grain under all conditions at lower operating cost.

Write at once for free catalog containing history and descriptions of threshers and letters from satisfied users.

Wood Bros. Thresher Company

Makers of separators and threshing engines
Des Moines, Iowa
Branch Houses at Minneapolis, Minn., Lincoln, Neb., and Decatur, Ill.

AT-N

Thousands Of Others Say The Same Thing

You're interested in what a thresher will actually do, not in mere statements.

Here's your actual proof—statements of men who have used Humming Bird Threshers, and who know from actual experience just what they will do.

When you have seen the Humming Bird work, you will agree with thousands of others, that no machine will do the work better or quicker.



10 hours ditch blasting worth 500 bushels of wheat

Mr. V. S. Darling, Auburn, Maine, secured that result. Ten hours of ditch blasting added \$1000 to the value of his farm. Mr. Darling writes:

"On October 15th, with Atlas Powder, we blasted a 600-foot ditch 4 feet wide by 2½ feet deep in about five hours. We got a perfect ditch. I have about 600 feet more to blast and when this is finished the job will be worth at least \$1000 to me."

Our Book, "Better Farming with Atlas Farm Powder," will show you how to blast ditches, remove stumps and do other farm blasting even though you be inexperienced. Write for a copy today.

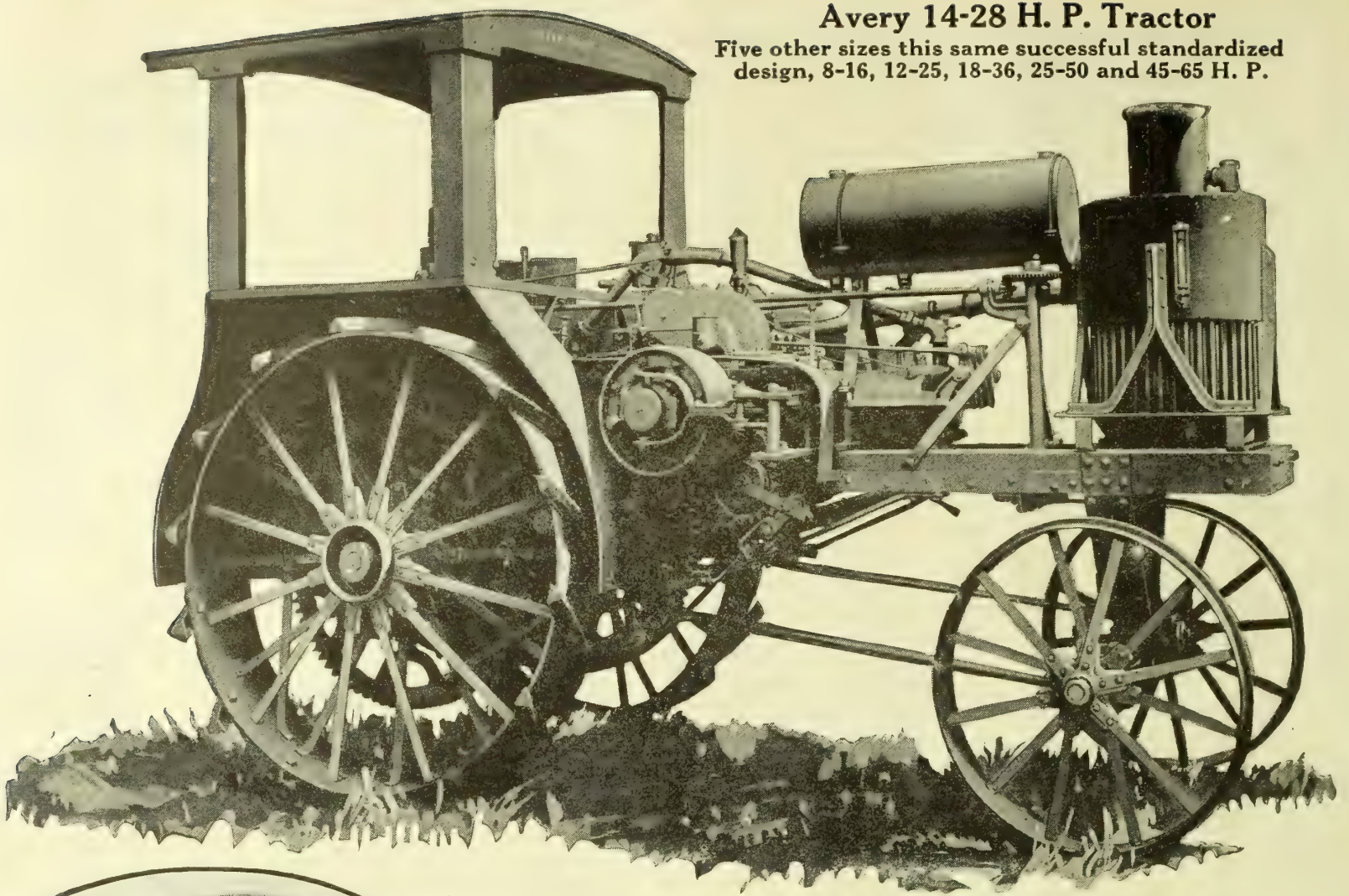
ATLAS POWDER COMPANY
Division AT-4, Philadelphia, Penna.

Dealers everywhere

Magazines near you



Avery 14-28 H. P. Tractor
 Five other sizes this same successful standardized design, 8-16, 12-25, 18-36, 25-50 and 45-65 H. P.



A Medium-Size Avery Tractor for Every Kind of Work

This is the 14-28 H. P. Avery Tractor—a 3-4 plow tractor that is especially adapted to any kind of field work, belt work, or road work. It is one of the most popular sizes of Avery Tractors we make; its popularity being due no doubt to its unusual efficiency in either drawbar or belt work.

It is also a very popular tractor among its owners. It not only measures up to the standards they had in mind when they bought this size Avery but it also pleases them so well that frequently another Avery is purchased by an additional member in the same family, or perhaps a near-by neighbor will buy one after watching its satisfying performance.

Has All the Exclusive Avery Features

In general design and appearance the Avery 14-28 H. P. Tractor is like the five other sizes of Averages, from 8-16, 12-25, 18-36, 25-50 to the 45-65 H. P. size. It has the "Draft-Horse" Avery Tractor motor—the motor that has more exclusive features than any other tractor motor. It has Centrifugal Gasifiers that turn kerosene or distillate into gas and *burn* it; Renewable Inner Cylinder Walls; Adjustable Main

Crankshaft Bearings; Valves-in-Head; and many other features.

"Direct-Drive" in the Drawbar or Belt

Like the other sizes of Avery Tractors, the 14-28 H. P. size has the "Direct-Drive" Transmission—a most efficient tractor transmission that delivers a larger percentage of the power to the drawbar and *all* of it in the belt. The belt wheel is mounted *directly* on the crankshaft. It is located where you want it—on the right side, easily accessible for putting on the belt and just high enough to keep the belt from dragging. And it is always in place for immediate use.

Write for special information regarding this popular 3-4 plow Avery 14-28 H. P. Tractor or ask for catalog showing complete Avery Line and all sizes of Avery Tractors from the little Six-Cylinder Model "C" to the big 45-65 H. P. Avery.

EVERY COMPANY, 334 Iowa Street, Peoria, Ill.

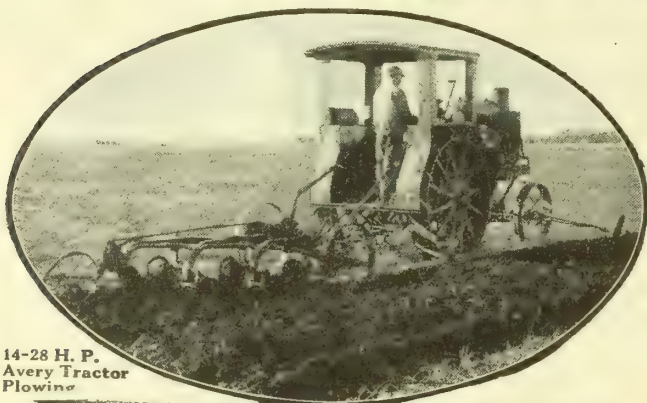
Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and Sacramento

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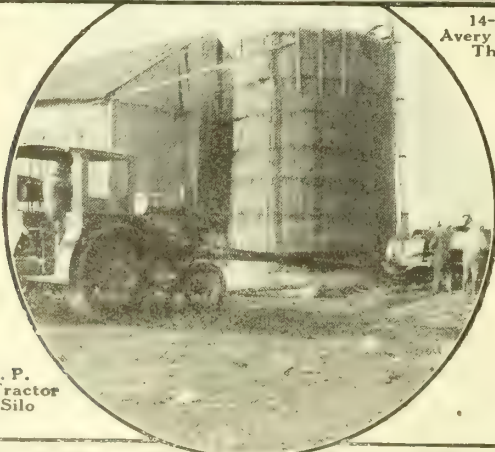
Motor Farming, Threshing
 and Road Building Machinery



14-28 H. P.
 Avery Tractor
 Plowing



14-28 H. P.
 Avery Tractor
 Threshing



14-28 H. P.
 Avery Tractor
 Filling Silo



14-28 H. P. Avery Tractor Pulling Road Builder

The NEW Avery Six-Cylinder One-Ton Motor Truck



A New One-Ton Truck But Not a New Name

Here is the latest addition to the Avery Line of Motor Farming Machinery—the *new* Avery One-Ton Motor Truck. As you will readily recognize, it is a new truck but the name “*AVERY*” is not a new one by any means. It is a name that farmers the world over know. It is a name that always implies confidence. It is a name that assures you of quality in materials and careful workmanship in construction. And it is a name that stands for “A Good Machine and a Square Deal.”

And while this truck is *new*—it is not *experimental*. For a long time we have been trying out a number of these trucks in both city and country hauling. We have put them over bad roads faster than they should go—we have treated them roughly. And when we say that this truck is a quality machine from radiator to tail light we know it to be true.

This truck is designed and built by a company who have had over forty years' experience in building machines for farmers. We know the transportation problems farmers have to solve; we are familiar with farm conditions and we believe we know the kind of sturdy, reliable truck farmers want.

Six-Cylinder Motor

It has the Avery Six-Cylinder motor—the same motor that has proven so successful in the Avery Six-Cylinder Tractors and

Motor Cultivators. This means plenty of power. It is equipped with Internal Gear-Drive, Vanadium Steel Springs, Stromberg Carburetor, Westinghouse Electric Lights and Starter, Willard Truck Battery, Alemite Lubricating System, Goodyear Demountable Rims, Pneumatic Cord Tires all around and other equipment which means dependable and economical service.

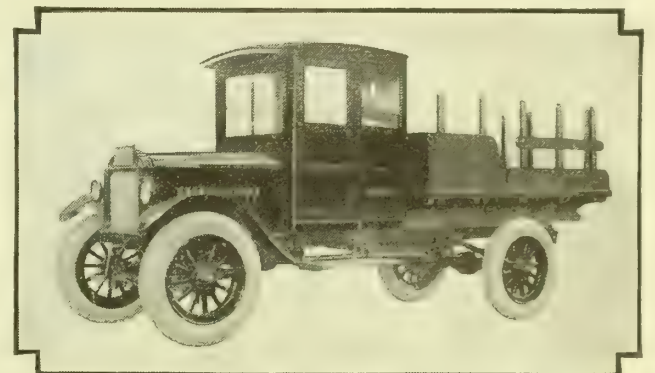
Every farmer needs a motor truck. It is one of the biggest time and work savers you can own. Here is a truck built especially for your needs by a company whose motor farming machines are now giving satisfactory service in every state in the Union and 68 foreign countries.

Write for special circular. Also ask for the Avery catalog showing the complete line of Avery Tractors and line of Avery Tractor-Drawn Machinery.

“Avery-ize Your Farm—A Good Machine and a Square Deal.”



Avery Truck
Equipped With
Stock Rack



Avery Truck Equipped With Stake Body

A Few Avery Truck Specifications

Six-Cylinder Motor
Internal Gear Drive
Electric Lights and Self-Starter
Front and Rear Wheel Fenders
Pneumatic Cord Tires
Demountable Rims
One Extra Rim
Vanadium Steel Springs
Alemite Lubricating System
Willard Truck Battery
And many other features that mean dependable and economical service.

AVERY COMPANY, 334 Iowa Street, Peoria, Ill.

Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and Sacramento

Distributors: AVERY COMPANY OF TEXAS; Dallas, Amarillo and Beaumont, Texas
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Motor Farming, Threshing
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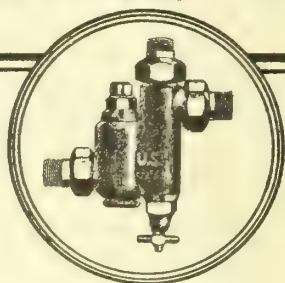
When you have Grass or Field Seed to offer, send us your samples.

Our unexcelled facilities for cleaning, grading and shipping, furnish sellers exceptional opportunities for marketing supplies.

Established in 1855

The Albert Dickinson Company
Minneapolis Chicago

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam traction field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Boys and Girls

The Zoo

Peggy and Polly and Phillis and Prue
Decided one day to establish a Zoo.
Peg had a kitten and Polly a dog,
Prue a tame pigeon and Phillis a frog.
And then, Cousin Bob had a pair of white mice
Which they knew he would loan if they asked
for them nice.
They got grandma's parrot, and Georgie
Brown's drake.
And they bought a big eel, which served for a
snake.
The yard was all fixed for this famous display.
And they asked all their friends for the
"Opening Day."
All went well till Miss Puss saw the mice in
their cage,
And she flew at the bars in a terrible rage;
And Georgie Brown's drake ate up Phillis's
frog.
Who sat sleepily sunning himself on a log.
And Polly's dog, Toby, set up a great wail,
For the parrot had caught and was biting his
tail.
And Prue's little pigeon got frightened when
she
Saw "Mr. Eel Snake," and flew up in a tree.
And the "Zoo" that was planned with such
trouble and care
By the quarrelsome pets was disbanded right
there.
And Peggy and Polly and Phillis and Prue,
Sat right down and cried. Now what else
could they do?—Ex.

Wreckers or Builders

CLARA LOUISE BURNHAM

Elsie Maynard, nine years old, came into her gate swinging her school books, accompanied by her friend, Marion Bush. Marion was pretty, her father owned two motor cars and she was a power in the school room.

The two children went up on the piazza, Elsie looking to see if her mother was sitting by the open window. Yes, there she was, giving her little girl a welcoming smile and nod, then going on with her sewing. The children settled down comfortably on the steps and continued the subject they were discussing.

"I could see as soon as she came into the room," said Marion decidedly, "that she is a girl I should never like. She showed all over how much she thought of herself."

"O yes," replied Elsie, proud to agree with Marion Bush about anything. "She's probably just as stuck up as she can be."

"And so over-dressed!" said Marion.

"Did you notice her diamond ring?" asked Elsie, uncertain whether or not to praise the lovely stone whose lights had fascinated her.

Marion turned up her nose. "I should say I did. The idea of a little girl wearing a ring like that, and to school of all places. Well, she'll find her airs and graces won't go down in our room."

"Hello, there's Michael!" exclaimed the visitor, and then she emitted a shrill whistle which caused the chauffeur of a passing limousine to look around.

"Well, so long, Elsie," she cried, as she ran down the steps.

"Goodbye," murmured Elsie gazing in admiration at the nonchalant manner in which Marion hopped into the limousine.

Then she went into the house.

"Mother I'm glad we're not newly rich," she said.

Mrs. Maynard laughed, "I wouldn't mind," she replied, "What's the news, to-day?"

"Nothing much," answered the little girl. "O yes, somebody has smashed the windows of that empty house on Orchard Street."

"Isn't it strange," said Mrs. Maynard, "that some people would rather wreck than build?"

"Yes," agreed Elsie, "That was a nice house. Whoever did it ought to be put in prison."

"You wouldn't like them for your friends, then?"

"Of course not, Mother! What are you thinking of!"

"Marion Bush."

Elsie looked up, and met a gaze whose loving gravity surprised her.

"Yes, I heard Marion wrecking and smashing a few minutes ago. She was breaking the commandment; 'Thou shalt not steal.' What meaner stealing is there than taking away one person's good opinion of another?"

"But, Mother, the new girl looked awfully proud and she had a diamond ring, wasn't that silly?"

"And my poor little girl didn't even dare to think it was pretty or say anything to stop Marion in her smashing. Think, Elsie, of that new little girl coming, a stranger, into a school where all the children knew each other. Wouldn't that be a hard position for anyone?"

Elsie's cheeks were burning now, and her eyes were thoughtful. "Nobody ate luncheon with her," she admitted reluctantly, "because Marion said—"

"Never mind Marion," interrupted Mrs. Maynard. "The question to me is whether my child is going to be a wrecker or a builder."

"But it is so hard to do anything that Marion doesn't like," protested Elsie.

"Yes, but if you take a firm stand and show kindness to the new school-mate you will find the other children glad to follow your example. Marion's opinions rule many of you; but there is only one thing that should rule, and that is *Right*. Let Love guide you and remember the Golden Rule.

Elsie's brain was busy with thoughts of the new girl and the way she had all day tried to behave as if she didn't care what the other children did.

"I wish it were tomorrow," she said suddenly.

"Why?"

"I'm going to begin to be a builder, no matter what happens."

From Our Boys and Girls

DEAR AUNT JANE:

May I join your circle? I am a little girl eight years old and go to school every day. I am in the third grade. I have dark brown hair and blue eyes. My papa takes The American Thresherman and Farm Power. He owns a 10-horse power Frick engine and 26 x 42 Frick separator. We own a farm of one hundred and thirty-six acres. We have twelve head of cattle and two horses. The horses' names are Charlie and Cot. We have two hundred hens and five turkeys. For pets I have a cow, two pigeons, a dog, five bantams and three cats. The dog's name is Cute and the cats' names are Friendly, Snowball and Mouser. I

Piggie's Thanksgiving Dinner

Don't you think "Piggie" looks as if she were enjoying her Thanksgiving dinner? "Piggie" belongs to Geraldine Evelyn Young and they are such good friends that Geraldine



Geraldine E. Young.

often sits on "Piggie's" back, as you see her doing in the picture. Geraldine writes that she has a little brother, whose picture she will send us soon. She and the little brother and "Piggie" live in Amanda, Ohio.

have two brothers and one sister. My brothers' names are Floral and Austin and my sister's name is Mamie. We live four miles from town and twenty-five miles from grandpa Morrison. I enjoy going to Grandpa's place very much when peaches are ripe. He had about six hundred bushels of peaches last year. I will close for this time as my letter is getting a little long and I will leave room for some other little boy or girl as this is my first letter to you. Your loving little niece,

ROMA MORRISON.

Point Pleasant, W. Va.

(I wish I could join you in grandpa's peach orchard, Roma.—AUNT JANE.)



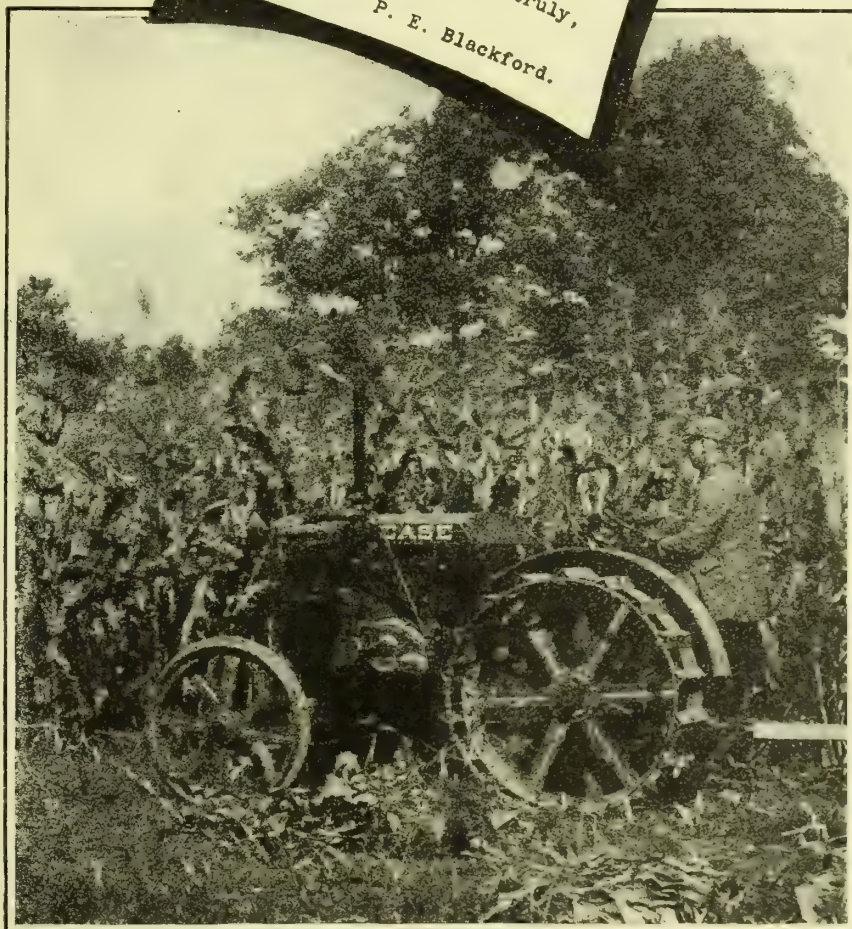
Spare Hours Meant Cash to Blackford—Today He Has A Good Job

Clarke School of Traction Engr.
Madison,
Wisconsin.
Gentlemen:

I was pleased to receive my diploma and I am sending you the photograph of myself which you requested. The picture is not very good, but rather than disappoint you, I am sending it.

I have not told you before that I operate a Case 9-18 tractor, disking, harvesting and many other jobs. The man who owns the tractor tells me I am hard to beat as I understand the tractor so thoroughly. I have been able to master the tractor very well, I believe, by the help of your Gas Tractor Course.

I am yours truly,
P. E. Blackford.



MEET Mr. Blackford! Just a regular fellow like yourself—a young farmer who has recently finished his work in our Gas Tractor School.

Mr. Blackford studied earnestly and diligently and no doubt deprived himself of time off for pleasures and amusements, for he had only his spare hours for the work.

But it was worth the sacrifice. He knew that if he wanted to stand out from the rest—earn more than just a common laborer's wages—that he must prepare himself.

Proficiency in running a gas tractor was his ambition. And he immediately set out to reach it. His enrollment in the Clarke School was the first step. Last June he graduated with good marks and was given his diploma.

Thus his spare time was turned into profit for himself, for he now holds a better position and is entrusted with the operation and care of his employer's tractor. Read his letter.

Finally, Mr. Blackford gives the credit for his success to the Clarke School, which is still more proof that he is a regular fellow.

There's no question about it. The man with training plus good common sense gets the preference whenever positions are to be filled. This is true in the office and it also holds good on the farm.

Young man! If you are ambitious and want to increase your earnings you cannot take a wiser step than to enroll in the Clarke School.

Just the thing for tractor owners, too. The information and knowledge gained will be of immeasurable value to them.

Our course of study in gas tractors is given by mail. The work can be done at home during time off, without giving up your present employment.

Does the little story about Mr. Blackford interest you? Do you feel that you would like to follow his example? Just send us your name and address and we'll mail you prospectus with complete information about the course.

Clarke School of Traction Engineering
Madison, Wisconsin

DEAR AUNT JANE:

May I join your circle? I am a little girl nine years old. I go to school every day when I can. I have two miles to walk. I am in the third grade at school. I like my teacher. Her name is Miss Anna Spink. We have seven cows and two horses. The horses' names are Maude and Dick. Maude is imported from Belgium. My papa takes The American Thresherman and Farm Power. He owns a threshing outfit, a Pitts 10-horse power engine and a Bidwell

thresher. For pets I have two rabbits. Their names are Bunny and Bessie. This is my first letter to The American Thresherman and Farm Power. I would like to see this letter in print.

Your friend,
PEARL K. MEYERS.

Darien Center,
(Write again, Pearl.—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl nine years old. My father takes The American Thresher-

man and Farm Power and I enjoy reading the Children's Page very much. I am in the fifth grade at school. My teacher's name is Miss Lillian L. Reickert. For pets I have a dog named Mopsie and five cats named Kitty, Pussy, Fluffy, Minty and Blacky. I hope to see this letter in print.

Your niece,
FLORENCE C. SCHUMACHER.
Juneau, Wisconsin.
(Here is the hoped-for letter at last, Florence.—AUNT JANE.)

"NORMA"

PRECISION BALL BEARINGS

(PATENTED)



Serviceability reveals itself to no mere superficial examination. It demonstrates itself by the hard, cold facts of performance. And records of performance done tell what records of performance may be anticipated. For years past, "NORMA" Precision Bearings have been—as they are today—the standards in the high grade ignition apparatus and lighting generators identified with cars, trucks, tractors and power boats having the most consistent records of high-duty performance.

See that your Electrical
Apparatus is "NORMA"
Equipped.

THE NORMA COMPANY OF AMERICA

Anable Avenue
Long Island City
New York

Mention The American Thresherman and Farm Power

Opfer Got \$160 for 48 Hours Work

In every locality there's plenty to do. You'll be busy 7 to 10 months in the year. The income is from \$15 to \$20 a day, the expense little. Mr. Opfer is only one of many of our friends who are making that much and more with a

"A Perfect Trench at One Cut"

BUCKEYE

Traction Ditcher

With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send for Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for this book, you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.

197 Crystal Avenue

Findlay, Ohio

Mention The American Thresherman and Farm Power

Parson Dickson's Sermon

IN de tenth chaptah ob St. Luke's gospel yo' will done find dese wuhds: "An' who am mah neighbah?"

If yo' am int'rested in luhnin' who youh neighbah am, read all ob de tenth chaptah ob St. Luke. A sutain lawyah was axin' questions ob Jesus, wid a desiah to confound Him. Dahfoh he stood up whah Jesus was blessin' a lot ob Christian wuhkaks an' axed Him, "What shall I do to inherit eternal life?" An' when de Lawd had axed him what am written in de law an' dis lawyah done tole Him, Jesus tells him dat dis am true, to obey de law thou shalt lib. De law done reads, "Thou shalt lub de Lawd thy God wid all thy haht an' wid all thy soul, an' wid all thy strength, an' wid all thy mind: an' thy neighbah as thyself." Den de lawyah axes de Marster, "An' who am mah neighbah?"

In ansah'rin' dis question de Lawd Jesus tells de lawyah de stohry 'bout de man dat went down from Jericho to Jerusalem an' who fell 'mong thiebes who beat him an' stripped him an' left him wounded an' half daid. An' how a sutain priest who came dat way passed by on de oder side; also a Levite did de same thing. But a sutain Samaritan came along, saw de man, bound up his wounds, took him on his own mule to de hotel an' done eahed foh him an' paid his bill to de landlwd. Den de Lawd axed de lawyah which ob dese men, de priest, de Levite or de Samaritan was neighbah to de man dat fell 'mong thiebes, an' he ansahed, "He dat showed muhey on him." Den de Lawd done tole de lawyah, "Go an' do thou laikwise." It am easy to ax questions an' to try an' east stumblin' blocks in de pathway ob men, but when it comes to takin' de paht of de good Samaritan how few ob us am ready to stretch fo'th ouh hands in aidin' de sick an' de needy, de suffahrin' an' de sorrowful! It am so easy to pass by on de oder side an' leabe de suffahrin' foh de good Samaritans to eah foh, when most ob us am guilty of dat bery act.

If yo' will look 'bout yo' in ebery city an' village ob de land, yes, in ebery neighbahhood in de country, yo' will done find cases whah men an' women an' little chillern need de suhvice ob a good Samaritan heah an' dah, who hab fallen by de wayside 'kase ob sickness or some calamity, an' who done need youh 'sistance in some way. De sweetest an' best realization ob a Christian's life am in doin' good to oders, jest as de Lawd ministahed unto de sick an' de distressed when He was on earth an' in retuhn foh which He was ill-treated, beaten, betrayed an' crue'fied.

De man dat taketh up his cross an' follows in de footsteps ob de Marster may find a hahd an' stony path 'long life's highway, but as he reaches de end ob de journey his pathway will grow brightah an' his life's wuhk will bring to him dat sweet consolation dat nothin' else on uth can gib or take away.

When I sees good Christian men an' women becomin' good Samaritans in de Lawd's vineyahd, willin' to lib a life ob self denial an' ob pribations, when dah talents would bring dem riches an' comfoht an' luxuries in de mahkets ob de wuhld; when I sees men an' women standin' on de street cohnahs ob de noisy cities, preachin' de wuhd ob God, singin' songs ob comfoht an' encou'agement, to de sweet strains ob mus'cal instruments, praisin' de Lawd in such fashion an' throwin' life lines to de sinkin' souls who pass along an' pause to heah a wuhd ob kindness or a song ob cheer, I cain't help but feel mah own unworthiness foh not tryin' to do moah to encou'age dese good people in dis wuhk, dat suahly requiahs fohtitude an' cou'age to keep on beahrin' dah crosses, sometimes when all seems dahk an' disappointin'.

Dat wondahful song dat Ira D. Sankey used to sing,

"If yo' cannot on de ocean sail 'mong de swiftest fleet,
Rockin' on de highest billows, laughin' at de stohms you meet,
Yo' can stand 'mong de sailahs, anchored ye widin' de bay,
Yo' can lend a hand to help dem, as dey launch dah boats away,"

always brings wid it de thought dat dah am always somethin' to do foh humanity an' foh God. A little piece ob money, a dime or a quahtah, offahed in de spirit ob de true Christian, will bring its rewahd an hundred fold.

Dis ole wuhld needs moah soljahs ob de cross, moah Christian men an' women to help cahry de cross dat dey may weah de crown. We needs moah Moodys an' moah Sankeys to help draw men neahah to God an' to do de things dat He has 'pointed dem to do. De wuhld neber needed men who am willin to sacrifice foh de cause ob oders so much as it does now.

Oh, dat moah men an' moah women would tuhn from de paths ob pleasuah an', puttin' on de whole armah ob God, would stand out as true soljahs ob de cross, ready to go through Gethsemane an' on to Calvahry, if need be, in de cause ob Christ, foh which He libed an' died.

Let us kneel down an' pray foh dat day to speedily come when a great revival ob de whole chu'ch ob God will bring thousands an' tens ob thousands moah back to de Lawd to ebery one dat claims Him at de present time

Organization Notes

(Continued from page 20.)

and doctor bills, which items are allowed by law, amounts to \$3,450.

This amount Eastes is liable for in event the Industrial Board decides for Shultz unless the defendants take an appeal to the higher courts and Section 4 is held invalid, which action is held very unlikely.

After Shultz filed his petition for a hearing the defendants submitted an answer in which they rested their defense mainly upon two propositions; that section fourteen was unconstitutional and that, if said section was held valid, it would operate against the other members of the threshing ring for whom Berry was working in the neighborhood, each of whom would be liable, with Eastes, for his share of the damages. Acting on this assumption the defendants, in their answer to the petition, sought to have the following equally made defendants with Eastes; A. E. Davenport, Oscar Adams, Herbert Brown, and Ralph Brown all of whose addresses are Gosport, and Hendricks Bowen, Dan C. Stoner, Oral Stoner and William Smith of Spencer.

The evidence and arguments on Shultz's petition were heard Friday and the matter taken under advisement by Judges Perkins and Fox, who will render their decision later on.

The case is one that is of vital interest to all the farmers over Indiana. There is no allegation that Eastes was in any way responsible for the accident in question, but he failed to see that Berry had taken proper precaution to safeguard the future of his employees and their families and for this failure must suffer.

Illinois Thresherman Arrested

We are reproducing here a short argument against cleats, printed in an Illinois paper, and the answer to it written by J. M. Boyer. Mr. Boyer tells us that since these letters were written, three members of the Illinois Brotherhood of Threshermen have been arrested for moving their engines on the public highways of Illinois in Vermillion County. The Illinois Brotherhood will help these men fight for justice in the courts.

G. A. Burgess, highway commissioner of Bement township, writes the Decatur Motor Club asking the club to help enforce the law which prohibits the use of tractors with cleats, lugs, spikes or lugs on the driving wheels on improved roads. Mr. Burgess says in his letter:

"There is one law that I would like for your association to get behind, and that is the law requiring all tractors using improved roads to remove the cleats. We have some roads recently oiled that were used by tractors with cleats. As a result of this use the roads were shamefully cut up and nearly or completely ruined.

"We have cut the cleats from our road engine and are able to pull our road machinery with the smooth wheels. Doing this has made an improvement of five-hundred per cent."

Mr. Burgess is recognized as one of the pioneer good earth-road men in this section of the state. In his letter depre-

cating the use of tractors with spiked, toothed or cleated wheels on the roads he is voicing the sentiments of highway commissioners everywhere.

Here is Mr. Boyer's Answer:

To the Editor of The Herald,
Sir: I notice in your Saturday's Herald of October 23, an article purported to have been written by a Mr. G. A. Burgess of Bement to the Decatur Motor Club, in relation to the removal of lugs from tractors and other farm machinery going on the public highways.

First. We would like to ask Mr. Burgess or any member of the Decatur Motor Club how they expect to transfer machinery from one farm to another without using the public highways, and whether or not the business of threshing, shelling, hulling, and baling of agricultural products needed by the people, who must eat in order to live, is more important than that motor pleasure drivers can sit comfortably in a Ford car.

Second. Mr. Burgess' idea of the removing of the lugs from engine wheels both steam and tractor is so ridiculous, so out of reason, and so foolish that it hardly needs an answer. I further say that Mr. Burgess could not hook on to the front of any kind of a separator and water tank and go up on North Water street to the Stevens creek crossing with any kind of gas or steam power on any day that it is not perfectly dry, or if the roads have been oiled, without the lugs. It may be that he could pull along on a level road.

Third. If Mr. Burgess or the Motor Club either would be successful in barring from the public highways of the state an engine or tractor, we are wondering who would do the threshing at the present time. They have laws that can be enforced if they have the officers who are inclined to enforce them and disregard justice, and equity to the people. The present law now bars agricultural implements of all kinds except possibly a Fordson tractor and a cultivator from driving down the highways. And, incidentally the Fordson tractor is sharp shod with cleats or lugs, and will tear the road to as great a degree or greater than the large sized tractor with thirty-six inch wheels.

If any person who is interested will look on page 670 of the Illinois Session Law of 1919, and does not discover sufficient reason to bar any machinery from the road, then we are mistaken in the law. Does the Motor Club wish to drive out of existence all kinds of motor power? If that is their aim then Mr. Burgess will be in the right.

It is high time that the farmers wake up and realize that somebody somewhere is putting propaganda out that has a tendency to force the farmer to buy his own threshing outfit, shelling outfit, clover huller, and remain inside of his own fence. The farmer is paying a tax upon every foot of road and getting nothing but the privilege of walking over it. If Mr. Burgess has a solution let him tell the manufacturer of the tractor or engine, and the agricultural implement manufacturing company his scheme and have them manufacture their machinery in conformity with his idea.

Yours,

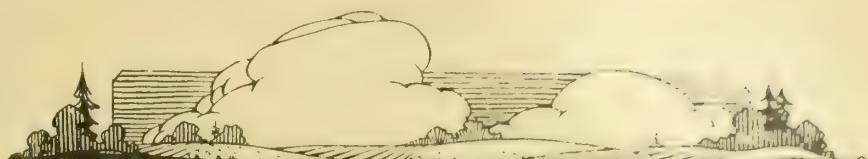
J. M. BOYER.

Sec'y of Illinois Brotherhood of Threshermen.

The street car was passing a glue factory, and the odor emanating therefrom was decidedly obnoxious. The prim young lady took out a bottle of lavender salts and sniffed vigorously. Finally the man behind her tapped her on the shoulder.

"You'll have to cork up that bottle, lassie," he said. "I can't stand that smell any longer."

The thermal efficiency of a Diesel engine is the ratio between the equivalent in heat units of 1-horse power and the number of heat units actually consumed by the engine in developing 1-horse power.



Old Sile's Bargain Counter.

A FULL section of land, fifteen acres cleared, 100 acres additional can be cleared and put in cultivation with comparatively small expense. Good stream of running water, \$5,000 worth of merchantable timber, \$5,000 worth of cord-wood, besides plenty of fire-wood for future use; all fenced with woven wire and barbed wire on top; little shack and small sheep-fold on land. Entire section sloping to the south. Rich clay land, will raise anything that grows in Wisconsin; richest of pasture and dairy land, ready to care for from 100 to 500 head of stock. Located 10 miles from county seat of Taylor County, Wisconsin, on two public roads, rural free delivery, school house across from one corner of tract, gravel road more than half the way from county seat. Ready market for timber and wood.

Price, if purchased before January 1, 1921, \$25,000. After January 1st, \$30,000, \$10,000 or more cash, balance as long as desired at 6% interest. If all cash is paid at close of deal and if purchased before January 1, 1921, net price \$21,000. All cash after January 1, 1921, net price \$25,000.

The timber and wood on this tract sufficient to put up substantial buildings and clear a goodly portion of the land.

Will sell to one or more parties as a whole; they subdividing the tract to suit themselves. No trades considered, no other terms than the above on this bargain.

B. B. CLARKE

MADISON, WIS.

Mention The American Thresherman and Farm Power

Here is a Saw without a Back-Ache!



By an improved method of grinding the blade, *Simonds Radial Crescent Cross-cut Saw* is scientifically tapered from teeth to back. It cuts fast and there is no binding to wrench you and tire you out.

Ask for this saw by its full name. It will be a good friend to you in cutting your winter's fuel supply, or in cutting logs for lumber.

Simonds Manufacturing Co.
"The Saw Makers" Established 1332
Fitchburg, Mass. Chicago, Ill.



Mention The American Thresherman and Farm Power

Seventh
AnnualSeventh
Annual

National Farmers Exposition

and

State of Ohio Live Stock Congress

Terminal Auditorium

Toledo, Ohio

Dec. 2 to 10 Incl.
1920

An Educational Enterprise arranged to aid the farmer in increasing production and operating at less expense, through the introduction of modern methods.

Open 10 A. M. to 10:30 P. M. Daily, Sunday Included

25c ADMISSION **25c**
War Tax Included

Mention The American Thresherman and Farm Power

FROM THE **BALE** TO THE **BELT**
In the ACME Plant

Atlas

FOR winter belt work on the farm or in the wood lots, there's no better canvas belt than Atlas.

Atlas Belts have earned a good name in the harvest field—demonstrated their quality and economy during many, many years. They're the belts to depend upon for your winter work, too.

Try Atlas out and see for yourself. You will be well pleased with the service they give. Order Atlas the next time.

ACME BELTING COMPANY
Manufacturers
NILES — MICHIGAN

FARM BELTS

Clears 18,000 Acres—a Record

(Continued from page 9.)

not represent a loss to the dealers who formerly handled land clearing explosives; it does represent a saving by the elimination of the handling and distributing expenses through the direct distribution by the dealers to the consumers.

"This saving on dynamite is the biggest definite factor of economy, but we have also a proportionate saving on the costs of all materials our association has distributed.

"Another feature concerned with the work of our organization that should not be overlooked, is the estimated value of the educational work that our organization has afforded. It is difficult to produce concrete evidence of this saving, but our statement is justified by the fact that our farmers in Marinette County have cleared their land at a comparatively low figure that is not fully compensated for by the reduced cost of materials. Our educational work has a value. This value is conservatively placed at from three to five dollars an acre on all land cleared. This means a saving of approximately seventy-two thousand dollars that may be included in our economic claim.

"Summarizing, we may justly place the amount in the neighborhood of one hundred thousand dollars saved through the activities of our Land Clearing Organization. To this we may add the increased value of the land that has been converted to a productive state. It is extremely conservative to state that clearing an acre of land in Marinette County increases its value one hundred and fifty per cent. This adds to the average Marinette County acre at least sixty dollars. The wealth of the

courty, therefore, has been increased \$1,080,000."

Secretary Livingston began getting in land clearing reports early in September, through a questionnaire. By mid-September he knew the goal had been reached and passed. In fact, on August 18, John Swenehart, land clearing director for the College of Agriculture, expressed himself as satisfied that the quota would be exceeded. Now the reporting farmers have recorded an average of eleven newly cleared acres per farm, instead of the six asked for. Not every farm in the county reported clearing for 1920, but those who did report more than made up for this deficit.

This achievement was celebrated October 12. One hundred and eighteen automobiles left the town of Marinette at ten o'clock. Additional cars joined the motorecade at Peshigo, Coleman, Pound, Beaver, Crivitz and Middle Inlet, and there were fully two hundred car loads of hungry men, women and children in Wausaukee at one o'clock as guests of the Wausaukee women at the luncheon served on the school grounds. A program of speaking followed the luncheon, and then an acre of stumps was lifted out of the ground with one blast of dynamite.

Brother, that was some explosion. The writer was as close to the acre of stumps as he believed safe, in order to take the picture shown with this article. As parts of stumps began coming down, he found himself scuttling for the tall timber in a very undignified manner. That explosion certainly was a fitting climax to a season's accomplishment in land clearing which surpasses anything that has been done before.

Why Farmers Want Trucks

(Continued from page 10.)

to date, to pay for his truck's total operating costs and depreciation.

Of course Bill has shown care in handling his hogs, to save all this shrinkage. He has a concrete-floored hog house, about twenty by forty feet, with a stove, cooker and mixing room. He is able to back right up to the hog, so to speak, whisk him into the truck and off to the railroad.

Bill hauls more than hogs. He hauled three thousand bushels of last year's corn crop, getting an average of one dollar and seventy-five cents a bushel for it, and over six thousand bushels of oats, some of which brought him a dollar per bushel. He is a close student of markets, naturally. When hogs drop to fourteen dollars per hundred he sells corn. When hog prices approach twenty dollars, he feeds the corn. His methods change with the markets.

Bill has some other things we have

omitted to mention. He has four sons, and every one is on the farm because he likes it there.

Perhaps there is some lesson in this, too. Hilmer hasn't clung to old, back-breaking methods when he saw a way to lessen the hardships of farm life. He isn't preaching the doctrine that what was "good enough for me is good enough for them." As a middle-aged man he has things a lot easier than his father had, and he's going to see that his boys get things as much handier in proportion.

This method pays, too. Hilmer doesn't hire a separator boss or an engineer. He raises one. It's the sure way to have one when you need him most.

When a truck salesman told me that Bill Hilmer had turned down an offer of six hundred dollars per acre for his farm, I exclaimed, "Impossi-

ble." I hadn't seen Bill's farm at that time—or Bill either. After seeing those eighteen fine buildings, which Bill has built and improved with the profits he has made from those rich fields he inherited from his hard-working parents, I no longer wondered. By hanging on to that land, through good seasons and bad, this Iowa farmer has seen the greatest blessings of modern life come to his door. He has gas engines, power pumps and electricity to overcome the drudgery that once made farm work a by-word; the motor truck is just an incident in the evolution of farm life.

Bill didn't express it this way at all, at all; but it's exactly what he meant. Farmers want trucks for the same reason their wives want washing-machines; they have them "coming to them."

Farming with English Tractors

(Continued from page 11.)

the small run, Mr. Wright is going to have a sad awakening. However, the section is a great grain growing district and he should not have any great bother in getting other work.

Prior to the war, considerable pig raising and cattle fattening was done. However, due to the shortage of labor and corn this had to be dropped but Mr. Wright intends to go in for it again.

Mr. Wright has several good ideas of looking after the tractor. After every one hundred acres of plowing and one hundred and fifty acres of cultivating, the tractor is taken from whatever work it is at to the workshop, the cylinder heads taken off, the carbon scraped and he personally examines the bearings. In this way the tractors are kept in first-class condition, and the risk of breakdown during the peak load reduced to a minimum. He also marks the gasoline and water cans so that no mistake can be made.

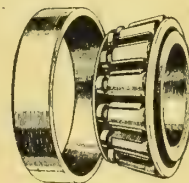
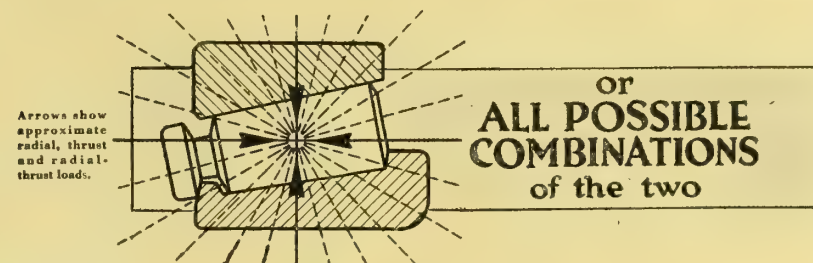
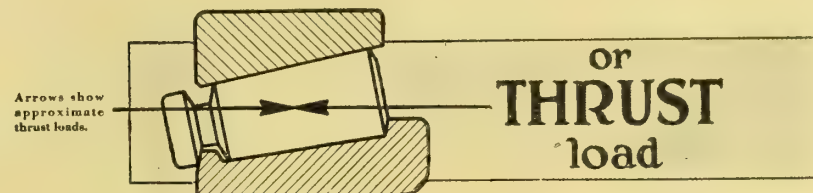
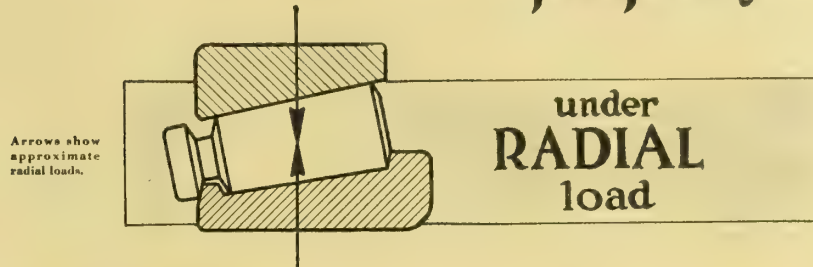
The Austin is a 25-horse power tractor and although it will be running light it certainly seems to me that the expense of running as compared with the cost of running the stationary engine would be far and away greater. It also means that sometimes the work is going to clash and the additional overhead of the stationary engine can be balanced by the lower operating cost.

Of course, there is always the danger of having too big a mechanical equipment as there is the danger of too many men and horses. But when it is possible to get down to brass tacks in figures, as you can with stationary engines and tractors, then there is no excuse for an under supply of mechanical power. With horses and tractors the question is different. There are so many factors to take into consideration, but a farmer must solve his problem of equipment as a manufacturer does.

The peak load, overhead, depreciation and operation cost must be taken into consideration before he can say that all horses must go, or the tractor is only to carry the peak load.

This is very far away from Mr. Wright's farm but it brought home to me forcibly the need for close figuring. The American farmer will have, for several years to come, a big demand for his produce, but the time will come when farm costs must be figured very closely and the farmer must go according to Hoyle or suffer the consequences.

The Tapered Roller Bearing is *the* type of bearing that will function properly



AND AT HARD SERVICE POINTS in Separators and all Threshing and Farm Machinery, just as in Automobiles, Trucks, and Tractors. Timken Bearings successfully carry these heavy loads under constant variations of direction.

THE TIMKEN ROLLER BEARING CO., Canton, Ohio
Plants manufacturing complete bearings at
Canton, Ohio; Columbus, Ohio; Birmingham, Eng.;
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Timken Tapered Roller Bearings for Tractors, Farm Implements, Passenger Cars, Trucks, Trailers, Machinery, and Industrial Appliances

TIMKEN

TAPERED ROLLER BEARINGS

Missouri Shows the Way

(Continued from page 12.)

where it is turned and kept in condition, relieving him of any loss. It places him in the same position as if he would ship as soon as the grain is threshed and yet sell when the market is highest.

It is plain that these favorable storing facilities have been appreciated, as storage space in these silos, before their completion, was engaged to total capacity, until spring.

There is no doubt that these condi-

tions will increase the amount of grain grown in this locality, as the grower feels that he is sure of a reasonable profit on his investment and labor.

The Department of Agriculture and the press of the country have urged the farmers of this country to produce record crops. It begins to look as if the farmers have done better than anybody else. With less labor and less freight cars than ever before, they have equaled war-time records for production.

Last year Kansas farmers, trying to do what the country expected of

Birdsell Clover and Alfalfa Hullers

have hulled over 80% of the World's Seed Crop
A record unequaled by any other machine in its class

Every Buyer in these days of high costs has a right more than ever before to expect **QUALITY** and **SERVICE** in his machinery. The Birdsell Line is built better today than ever before. We pay more for materials and labor, we charge more for our machinery but the thresherman knows he gets **REAL VALUE** for his money and is always pleased with Birdsell Machinery.

Light Up-Keep — Steady — Profit Producing Machinery

We still have Hullers in all sizes for prompt delivery either from the **FACTORY** or at our **BRANCH HOUSES**. The Late Fall Trade always requires quick delivery—we are prepared—We Have the Goods. Write today.



3 sizes of each Clover and Alfalfa Huller—
from the smallest to the largest on the market.

Birdsell Mfg. Co., South Bend, Ind.

BRANCH HOUSES

MINNEAPOLIS
PEORIA
INDIANAPOLIS

TORONTO

KANSAS CITY
ST. LOUIS
COLUMBUS

them, produced the second largest crop in that state's history,—146,000,000 bushels. When this harvest season arrived, 20,000,000 bushels of this great crop were still within the state. The farmers were willing, even anxious, to sell the grain, but they could not get the cars.

Does this look like a square deal? The men who have called loudly to the grain farmers for help will do well to turn their attention to markets and transportation. Kansas has raised a crop, in 1920, almost exactly the size of the bumper 1919 crop. In many localities, the farmers have been so busy raising grain that they have had no time to build additional elevators.

Missouri is not primarily a wheat state, like her western neighbor, Kansas. But she has raised her share—and more. When the Monroe farmers found themselves in a bad way, after last harvest, they decided one such lesson was enough. They'd put their faith in God; all others—C. O. D. And God helps those who helps themselves.

Missouri and Kansas are not the only states whose farmers must protect themselves against the uncertainties of shipping and marketing. Tennessee, Mississippi and Georgia are finding it just as essential in the handling of the cotton crop.

"Ability to carry his cotton and market it as it is needed by the mills spells the financial independence of a

cotton farmer," a Bureau of Markets specialist said recently. "Therefore an important function of cotton warehouses is to provide the farmer with suitable collateral for securing loans. To this end every precaution should be taken to safeguard the integrity of the receipt given for cotton stored, in order that the certificates may command the highest loan value at the lowest interest."

"Such a receipt should be negotiable readily without reference to the financial or moral responsibility of the individual who may happen to hold it. At present, it frequently happens that a warehouse receipt for cotton is worth no more than the personal responsibility of the holder. As the most of the cotton is grown and marketed by men of limited means, it is of the utmost importance to every producer of cotton, no matter what his individual financial standing, that he be able to store his cotton in a warehouse and get a receipt for it, which he can readily turn into cash in order to finance the holding of his cotton."

The financing and building of these warehouses can be handled by Southern cotton growers just as well as the Missouri farmers are handling their cooperative exchange. During the recent conventions, the two big political parties both pledged themselves to support legislation permitting cooperative buying and selling by farmers. With business con-

ditions and legislative actions both favoring cooperative farmers' societies, it seems foolish for the producers of this country to remain longer at the mercy of broken-down rail transportation and fluctuating markets.

The big storage elevators often save hauling. Often a surplus of grain is produced in one county; after some months, it develops that the neighboring county had a shortage of the same grain. Long and expensive hauling is eliminated if the farmers can gain time to survey the demand almost at their own doors.

Because the southern states are importing millions of bushels of corn annually, while certain sections of the South are producing surpluses, the United States Department of Agriculture recommends the introduction of more adequate marketing facilities in sections of abundance, and standard practices regarding preparation for market. To realize these ends will require concerted action on the part of communities concerned.

The department suggests that southern dealers and consumers handle and use southern grain wherever possible, and that local dealers' associations and chambers of commerce which have not done so already, pass resolutions urging members to use native corn, and also hay, whenever available.

Since as much of the corn as possi-

ble should be used in the community where grown, every farmer should feed as much stock as he can. Those having a surplus should endeavor to dispose of it to neighbors. In this connection the advantage of some central agency to bring buyers and sellers together is pointed out. In many instances cotton warehouses, oil mills, and similar buildings can be used as temporary storage places, thus permitting growers to hold their crop until the market is favorable.

These conditions, at first thought, have no bearing on the Monroe City elevator. On second thought, you will find that in most sections of our country the farmers are annoyed by the same problems that have heretofore harassed the Missouri farmers around Monroe.

Whether the crop be corn or cotton, tobacco or wheat, there is no doubt that a farmers' cooperative society, with its own elevator of sufficient capacity, can do much toward eliminating the present distress of the harvesting season.

The Monroe farmers feel that they have this shipping situation by the tail—and a down-hill pull. They are not afraid to sow and grow all the wheat possible, for now they have means to forestall the after-troubles of shipping and marketing.

If you are in need of proof, go to Monroe City, Missouri. You will find a live bunch of farmers who can "show you."

Aunt Malinda

IT'S no wonder the country's no better off politically than it is. With all the ignorance about affairs of state that men are possessed with, it's a wonder that the country's been run at all. Sometimes I think the only reason that the ground is left is because it couldn't be carried away or hocked, politically.

Just as soon as I found out that Tennessee couldn't keep women from votin', and that we'd be allowed our franchise, I started in tryin' to learn more about things. I wanted to sorter get in the current of the political stream just enough to ascertain whether I wanted to take a hand or not. So I began askin' Silas questions about this, that and t'other, and gettin' answers that didn't answer. At first I thought he didn't want to be bothered or talk about politics and I refrained from askin' many questions, but when I struck a knot and persisted he'd begin to squirm and evade the question until I got riled and then I turned on him and told him that he was either ignorant or didn't know. Failin' to get a rise, I made my questions so specific that he couldn't dodge.

I'd read a lot about Bob La Follette jumpin' on Senator Lenroot, whom everybody else exceptin' Bob's crowd wanted to see re-elected United States senator, and all about their gab about the "Esch-Cummins" law, so I asked Silas what the "Esch-Cummins" law was.

"Why," he says, "the Esch-Cummins law seems to be about right. It suits everybody exceptin' the 'Non-Partisan Leaguers' and a few other bellyachers."

"Yes," I says, "but I want to know what it's all about and what kind of a law it is."

"Oh," he says, "that's different. You know, Malinda," says he, "there used to be two Siamese Twins who were born fastened together and Barnum carted 'em over the world, exhibitin' 'em for two bits a throw. Their names were 'Eng and Chang,' and they stuck together all their lives, and when one died the other stopped breathin', too. Now that's the way with this 'Esch-Cummins' law," says he. "Esch comes from Siam, or some other seaport, and Cummins from Iowa. You know how Luther Burbank grafted cucumber and watermelons and muskmelons all on one stalk and grew 'Honey-Dew' melons, and Casabas and half-breeds on the same vine. Well, Esch, bein' from Siam, stood in with Cummins and together they formed a Siamese-Twin law that sorter let the railroads get in their hooks so they could earn enough money to overcome the printin' bill, and private car expense contracted by William G. McAdoo durin' the war, and which Lenroot helped enact without askin' the consent of Bob LaFollette. This caused a family row in the Senate and Bob got sore on the gang and wanted to cut the hyphen that held this law together, and rip Esch and Cummins apart and beat Lenroot for the Senate with a Norwegian friend of his from La Crosse who couldn't muster a corporal's guard in the primaries. You see, Malinda," says he, "Bob 's the 'Luther Burbank' of the primaries and was 'most tickled to death with it until his gang couldn't manipulate things, and then he started in to upset the apple cart and beat Lenroot who was one of the god-fathers of the 'Esch-Cummins' law."

"But," I says, "you ignoramus, what's this law about?"

"About the amalgamated and allied joinin' together of Esch and Cummins," he says. "Can't you understand?"

"No," I says, "I can't, and neither can you."

Then I asked a dozen other questions that were bein' hoed over in Wisconsin and got about as much sense out of one as I did out of the other.

"Why," he says, "in Wisconsin it's the law to have a primary election, which means that you can coax anybody to desert his party for the time bein' and vote for any other party, which will for the time bein' defeat the very thing for which the primary election was enacted, and then if it don't suit you, you can kick over the traces and vote for anybody else you see fit at the real election.

"Take, for instance, Senator LaFollette," says he. "He holds his seat in the United States Senate as a Republican but it was his appeal to 'fair minded' and 'feeble minded' Democrats that pulled him through. Then he gets offered the nomination for President by the 'Non-Partisan League,' or some other hybrid organization, and the only reason he turned it down was because of his 'meal ticket' as a senator bein' a surer shot than bein' a candidate for President of a 'shoe-string' organization without funds. Bob's dearest friends all admit that it takes money to run a political campaign," says he.

"I reckon we women folks in Wisconsin have a lot to learn, accordin' to your tell," says I, "but all this talk don't get me anywhere on what I've tried to find out."

The Siamese Twins and Luther Burbank's watermelon mixtures don't give a very clear conception of the Esch-Cummins law; I'll say it don't.



Runs Easier—Cuts Faster

Two mighty good qualifications in a saw—and two of the reasons why there are so many Atkins in use on the farm today.

For the farmer is a keen judge of saws. He knows there's a difference. The saw that goes through in the quickest time and with the least effort makes a hit with him. And so Atkins is his choice.

The Atkins slogan, "A Perfect Saw for Every Purpose," finely illustrates the scope of Atkins service. Ask your dealer for Atkins Saws.

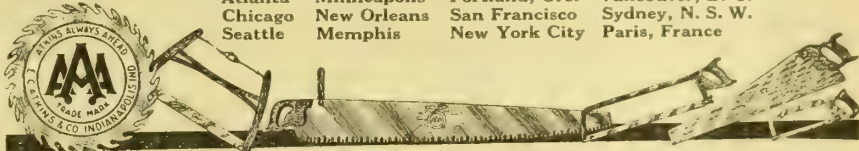
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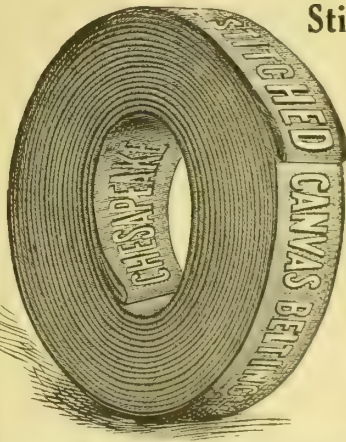
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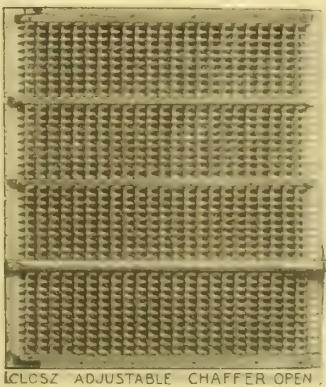
IT is made from the highest grades of raw material which are used after a most rigid inspection. The manufacturing equipment is of the most up to date type and there are thirty years of manufacturing experience behind the goods. All these points produce a belt that will give you the maximum service under all operating conditions. The price is reasonable, even low, for the quality offered. Full stocks are carried and prompt deliveries can be made.

You are offered Quality, Experience and Service at a minimum price. Samples and further particulars will be gladly sent without obligation.

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have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa

\$3,500 Disappears in 3 Years!

The officials of the Water Company were surprised a few days ago when James Blank, the man in charge of deposits, confessed to having taken \$3,500 in deposits for his own use without anyone being the wiser. The confession came like a bolt out of the clear blue sky. In the entire history of the police there never was a more clever system of broad daylight thieving.

In the rule of requiring a deposit of \$5 from non-property owners for meters installed on their rented premises, Blank saw a chance to get rich quick, because no deposit was required of property owners themselves. When a non-property owner wanted a meter, he paid the required deposit money to Blank who would keep the item off the books, classify the resident as a property owner, and then pocket the money himself. In this way it did not take long to accumulate the tidy sum of \$3,500.

Blank was enabled to get away with this scheme under the very eyes of his employers because of his remarkable memory which was capable of recognizing a person at second meeting without fail. He would be able to tell the name, initials, address, and whether or not the person had paid the deposit.

To any depositor moving out of the city and wanting his meter removed, Blank would pay the \$5.00 refund out of his own pocket. Because his memory was so perfect, no mistakes were made. The large number of meter users who remained in the city made the balance of deposits big and in Blank's favor. The Water Company never questioned the apparent big increase in property owners with the result a decrease in non-property owners. They couldn't smell the rat.

During the entire three years Blank did not once leave his cage during business hours nor did he take a much needed vacation. If he had, he surely would have been detected in his scheme should a man call for his refund which would not be on the books to his credit.

Things came to a head when an honest assistant was put in the cage with Blank. Becoming aroused at his superior's actions, he reported his suspicions to the officials who lost no time in acting. Blank not only confessed, but he gave the name and address of the entire 700 from whom he had pocketed deposits. A total of \$3,500!

Thieving as sly and as systematic as this is going on about us continually. For instance, every day you run your engine with a slide valve, a worn cylinder, and imperfect rings, you are being robbed as surely as Blank robbed the Water Company. The quickest way to stop this leak is by installing a balanced valve and vapor tight rings, and the Baker Valve Company of Minneapolis, Minnesota, can furnish you just what your engine needs. They are engine experts with years of experience and their advice is free for the asking. Write to them today.

Joseph K. Sharpe

ON October 26, 1920, in the sixty-sixth year of his usefulness upon earth, Joseph K. Sharpe, president of the Indiana Manufacturing Company, Indianapolis, Indiana, entered the higher life, leaving behind a



Joseph K. Sharpe.

world of friends to regret his going. Few men in the machine world were better known or better liked than this Grand Old Scout, who made the world better by his sojourn here.

'Way back in the early sixties,

when the nation was being torn asunder by the Civil War, and when the Editor was a ragged little orphan without whence or a whither on the troubled sea of life, the father of Joe K. Sharpe trusted him for enough leather for a pair of shoes. When the years had rolled on and the subject of this sketch had grown to manhood's estate, he was one of the Editor's best and most substantial friends, and more than once has his great big-heartedness helped the Editor pull through some hard places in the business world.

Mr. Sharpe was indentified with the wind stacker promotion from its infancy, and it was his money that gave the pneumatic stacker its first real boost. He was president of the Indiana Manufacturing Company for many years before his death, and was the inventor of the Sharpe grain saver, an attachment for wind-stackers.

Upon the grave of our deceased brother and friend we place this wreath of laurel, that he was a great big-hearted, whole souled gentleman, one whom it was an inspiration to meet and to have the pleasure of calling a friend.

National Implement and Vehicle Association Meeting

THE three-day meeting of the National Implement and Vehicle Association, held at Atlantic City beginning October 20, was marked by the spirit of coöperation shown by all men connected with the implement business.

Manufacturers and dealers shared with farmers and bankers an interest in the proceedings and a place on the program.

When Pres. H. M. Wallis called the meeting to order, two hundred individuals, representing seventy member companies, were present. The number of persons attending the meetings reached four hundred before the closing session. These men were present in spite of having to travel far, leaving behind many pressing duties for the knowledge and inspiration to be gained at this representative, national gathering.

The technical questions of factory management and marketing of products did not prevent ample time from being given to the pressing problems of labor, agriculture and finance. It is doubtful if far-sightedness is as necessary with any group of men as it is with the men who today make farm power equipment.

Space forbids giving a full list of all officers, committee members and vice-presidents nominated; but many readers will be glad to know that

W. H. Stackhouse, of the French and Hecht Company, Springfield, Ohio, was nominated as president. This selection of the nominating committee is a fitting appreciation of his fine work in the past as chairman of the executive committee. None who has heard Mr. Stackhouse's common sense, unaffected talks on business conditions ever forgets them.

Men in the trade will be looking forward to the meeting of the Tractor and Thresher department of the association, to be held November 18-19, at the Congress Hotel, Chicago, Illinois. Those of us in the Middle West may well appreciate and take advantage of this chance to hear such men as F. P. Mount, J. B. Bartholomew, and C. S. Brantingham. The four tractor and implement associations of the Pacific Coast will send representatives to this meeting.

This meeting will give new members a chance to know H. J. Sameit, who has just been chosen secretary of the association. His good work as acting secretary, during the past year, convinced everyone that he was the man for the place.

Gasoline, unlike the other heavier petroleum products, throws off an explosive vapor constantly, even at extremely low temperatures.

CORD TYPE TIRES Standard Make Inner Tube FREE 8000 MILE GUARANTEE

We are introducing a new reconstructed, reinforced cord type anti-skid tire in one design only. Perfectly moulded with live snappy rubber and all tires are true and uniform (not sewed or seconds). These carry the usual guarantee, and in addition as an appreciation of your first order we will include with every tire one standard tube FREE. Every car owner should send for a trial order. They give by far the most miles per dollar spent and add attraction to every car.

WHITTEN GUARANTEE IN EVERY TIRE

30x3	\$ 7.85	32x4 1/2	\$12.40
30x3 1/2	8.95	33x4 1/2	12.95
32x3 1/2 S.S. only	9.55	34x4 1/2	13.60
31x4	10.80	35x4 1/2	13.85
32x4	11.15	36x4 1/2	14.35
33x4	11.60	35x5	15.35
34x4	11.95	36x5	15.45

State whether you want straight side or clincher, plain or non-skid. Send \$2.00 deposit for each tire ordered, balance C.O.D. subject to examination, or 5 per cent discount if full amount is sent with order.

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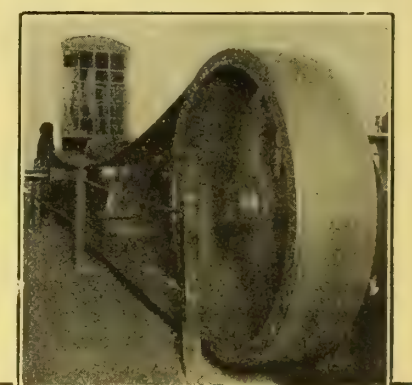
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Save your Belts and make them work with Cling-Surface

Belts Nowadays
Cost Money

If they slip they burn and later will crack, while slipping wastes power. If they slip they run off, which means lost time.

Don't use cheap belt dressings on your belts but use Cling-Surface Belt Preservative which for 25 years has been used all over the world by leading factories and threshermen.

Contains no rosin and is not sticky. Keeps leather and canvas belts pliable and waterproof. Does rubber belts good. Stops slipping of all belts so they can run slack and under full loads.

Buy in 5 or 10 lb. tins from your dealer or direct from us, f.o.b. our warehouses. Ask us about it.

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STUDY AT HOME

Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

Clarke School of Traction Engineering
Madison - - - - - Wisconsin

Uncle Silas

TOO many people depend on elevator luck to carry them to success.

SOME men have a following, but none can compare with that of Satan.

IF skirts get much shorter, our female population will look like a livestock exhibit.

WE should enjoy our liberty for, like the old woman's party, it cost enough.

WHOEVER owns the ouija board business in this country has a fine piece of pie.

IT is well that some folks can afford diamonds, or otherwise there would be nothing brilliant about them.

WE may not have a league of nations in politics, but we have one in millinery styles.

TO throw mud at your competitor is foolish, for you might miss him, and you would have dirty hands.

WHEN a man thinks he can take an ear of corn and put a bridle on the whole nation, he needs non skid tires for his imagination.

MOST wives can overlook the sight of their husbands' trousers bulging at the knees if they also bulge at the pockets.

THE highest compliment one woman pays another is to copy her best dress, yet it is the only compliment that makes a woman furious.

WHEN some city people go to the country, they expect to be met by a field kitchen and commissary.

THE man whose culture is exhibited at the waist line is not the right sort of mate for a literary woman.

IT looks now like Mexico might evolve something modern after years spent in making medieval history.

GIRLS of today will have to be careful about falling for the attentions of men who may be seeking an office instead of a wife.

IT'S funny how a man's views change with marriage, so that cute sayings of his sweetheart are entirely out of place when uttered by his wife.

IT'S a serious matter trying to be funny when you don't know how. The spark-plugs fail to ignite the "gravy" as it drips down, and the ignition kickers and leaves you in b-flat.

ABOUT the hardest job in courting a girl is to make yourself agreeable with the old folks when you call if, perchance, they have another son-in-law in mind. I've tried it, Ezra, and it's like rolling up hill in a thistle-bed.

ALONG with the other disappointments of the present administration was the signing of the suffrage amendment without the expected pomp and show.

THE reason so many people are disappointed in what they get out of life is because they expect to invest in "wild cat" stock and get a producing well.

THE temperance workers in this country received a blow when Reverend Walker, speaker in the Anglican Synod, said that prohibition was anti-Christian and the idea of American cranks. Take that from Australia!

WHEN Ponce de Leon came to the New World in search of the fountain of youth, he did not know that by a slight operation he could have annexed some glands from the monkey and restored his youth, thereby saving the trouble and expense of his wild voyage. This discovery by a surgeon of today is perhaps not so new, for who knows that it was not practiced in Biblical days when men lived as long as nine hundred years and retained their youthful vigor.



NEVER-CLOG SAW DUST BLOWER

THE ONLY PRACTICAL BLOWER MANUFACTURED FOR PORTABLE MILLS

It can be attached to any portable mill and is guaranteed to do the work better than any other blower on the market. It will blow out bark or knots or small pieces of edging without clogging. The saw dust does not go through the fans, thus doing away with all danger of breaking fans or housing. It will pay for itself in a 30 days' run and will last for a lifetime. Also it requires only half the power of a blower where the saw dust goes through the fans.

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Size	Tires	Tubes	Size	Tires	Tubes	Size	Tires	Tubes
30x3	\$6.00	\$1.75	32x4	\$8.75	\$2.60	36x4½	\$12.00	\$3.40
30x3½	7.00	2.00	33x4	9.00	2.75	35x5	13.00	3.60
31x3½	7.25	2.10	34x4	9.25	2.85	36x5	13.25	3.70
32x3½	7.50	2.25	34x4½	10.50	3.00	37x5	13.50	3.75
31x4	8.50	2.50	35x4½	11.50	3.15			

Send \$2 deposit for each tire and \$1 for each tube ordered, balance C. O. D. Tires shipped subject to your examination. State whether S. S., C. L. (Q. D.) plain or N. S. is desired. All same price.

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Thousands of belts on thousands of tractors transmit power but in so doing hundreds of horse power are lost through imperfect transmission. Belts slip. Slipping generates heat that destroys their composition. Oil and moisture and dust contribute to the decay.

Honest dressing, such as Dixon's, maintains belting in top notch form. As long as a belt remains in its original condition of life and pliability it is worth its cost price.

Inefficiency and waste of power are crimes in times of economic stress.

A booklet on "The Proper Care of Belts" is yours for the asking. Also a trial sample if you desire. Ask for Booklet No. 22-O.

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CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

Oldest Living Thing in the World

By ROBERT H. MOULTON

THE oldest living thing in the world is a tree. But it is not in California, as might be supposed, for the redwood, although a giant, is equaled in longevity by the bald cypress, and in at least one instance the cypress is ahead. This aged cypress stands in southern Mexico in the village of Santa Maria del Tula, and experts, judging by its gigantic bole and by the slow growth of the species, have estimated the age of the patriarch of all trees to be between five thousand and six thousand years.

These figures are staggering to the imagination. Taking the lowest computation, when the seed from which the tree sprang fell upon the earth, King Menes was holding the first reign in Egypt of which we have historic knowledge—three thousand years before the birth of Christ. It was a slender stripling two hundred years old when Cheops drove his subjects with the lash to the labor of building the Great Pyramid. It had reached a lusty youth of fifteen hundred years when the Hebrews made their exodus from the land of the Nile.

This living thing in tropical America was silently building itself to its present stature and vigor seven centuries before Babylon reached its greatest splendor. Ancient Ninevah, in the ninth century before the Christian Era, was a parvenu compared with the del Tula cypress. The earliest cuneiform inscriptions which archeologists have

in Assyria date back to only 1800 B. C. and the tree in Mexico which was to arise in the distant future on a new and unknown continent had even then lived almost as many years as separate the world today from the final recall of the Roman legions from Britain.

This still flourishing tree of the twentieth century had built its annual rings and spread its yearly foliage for ten centuries when Abraham tended his flocks and saw a vision of the Jewish race that was to be. It had lived two thousand years before David slew Goliath and Solomon erected the temple at Jerusalem.

In the eye of its hoary antiquity, Troy, Athens, the Macedonian Kingdom and the Roman Empire were mere upstarts of time. The discovery of America and the conquest of Mexico by Cortez would seem, in its life, things of only a few months ago. To this cypress may more fittingly be applied the lines which Cowper wrote to the Yardley Oak:

"O, couldst thou speak,
As in Dodona once the an-
dred trees
Oracular, I would not curious
ask
The future, best unknown;
but, at thy mouth,
Inquisitive, the less ambigu-
ous prest!
By thee I might correct, erro-
neous oft,
The clock of history; facts and
events
Timing more punctual; unre-
corded facts
Recovering; and misstate
setting right."

The del Tula cypress was first noticed by Alexander von Humboldt, in 1803, during his travels through this part of the country. At the time of his visit he inserted a square board into the side of the tree, cutting a shallow hole in the outer part of the tree for that purpose. This board bore a Spanish inscription, a copy of which does not seem to have been recorded.



Showing Gigantic Trunk of the Mexican Cypress.

The last scientific measurement of the tree was made in 1903 by Dr. Herman von Schrenk, who was at that time connected with the United States Forestry Service. While traveling through southern Mexico he determined to inspect the Santa Maria del Tula cypress. Arriving at the village, he introduced himself as an official of the United States Government who wished to examine the famous tree. The mayor welcomed him with elaborate ceremony.

Dr. Von Schrenk learned that the tree was regarded as sacred in the vicinity and that it was

guarded night and day by two soldier sentinels. Escorted by as numerous and dignified a retinue as the mayor could muster, he marched to the little graveyard in which the cypress stands.

Before the broad and towering bulk of this one life, which has persisted without interruption since the date of the dawning of history, the visitor halted in awe. Had it possessed eyes and tongue, what treasures of information could it have added to the annals of man! What revolutions in Mexico it could have related, what rises and falls of monarchies and civilizations in tropical America!

But flights of fancy gave way to immediate scientific duties. Authorities on trees had declared the discovery of the approximate age of this cypress to be one of the most important problems in the arboriculture. They had expressed a hope that the next scientist who should visit the ancient living monument would not fail to complete the evidence needed.

The mayor of Santa Maria del Tula, however, opposed a barrier of adamant. Measure the circumference of the tree? Surely. Photograph it? Indeed, yes. But to take an instrument and bore from the trunk a plug two feet deep and half an inch in diameter? Horrors, no!

In vain Dr. Von Schrenk urged that this experiment had been made hundreds of times without damage to trees, and that by counting the rings shown on the plug he could learn the tree's average rate of growth and thus solve one of the great scientific problems of the world. The mayor was all humility and submissiveness. Anything he possessed was at the disposition of the distinguished United States official. But touch the tree he should not.

So Dr. Von Schrenk was compelled to content himself with measuring the bole, and with taking several photographs of the tree. One of them, taken from the roof of one of the buildings across the square of the small churchyard where the

cypress stands, gives a good idea of the general shape of the tree. The crown is almost round, and the tree has little resemblance to young cypress trees growing in dry localities or older ones growing in the swamps, but looks more like a large oak. It has an extremely massive but comparatively short trunk, deeply fluted.

A careful examination of the tree showed no evidence of decay or disease of any sort, all of the branches appearing healthy and vigorous. The best indication of its good condition was evidenced by the manner in which the famous Humboldt plate had been more or less covered during the hundred years after its placing. The tree had al-



Cypress of Santa Maria del Tula.

(Continued on page 54.)

For Sale and Want Department

If your engine is too small or somewhat worn, if you have a thresher, feeder, stacker, shredder, sheller, cream separator, baler, wood saw, farm land, or anything else that you would like to get rid of—

Let us help you sell it

A "For Sale" ad in these columns will put you in instant touch with thousands of men, among whom there is sure to be a goodly number who are anxious to buy just what you have to sell. You can also find just what you want if you will advertise your wants in these columns.

Fix up a little ad for the next issue and start things moving right away. Quick sales come from our "For Sale and Want Ads" and the cost is only trifling when you consider the service.

Twelve cents a word each month. Remittance to accompany order. Copy for this department must be in our hands by the first of the month.

HELP WANTED

WANTED—Salesmen to travel eastern South Dakota and southwestern Minnesota by the Illinois Thresher Co., Sycamore, Ill.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

FOR SALE.

FOR SALE—10-20 Titan. A. Neudecker, Clements, Minn.

FOR SALE—Southern Minnesota farms, and rent. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—20-H. P. gas engine with steel truck. O. M. Mundale, Frost, Minn.

FOR SALE—My Ottawa C sheller, thirty-four feet of drag. In running order. \$100. Chas. Wycoff, Wyoming, Ill.

FOR SALE—Case corn shredder, used twenty days—\$700. Albert O. Hanefeld, R. 3, Windom, Minn.

FOR SALE—16 Reeves, 20 return flue Avery, 36x56 Reeves, 36x58 Case. Frank Serrine, Granville, Ill.

FOR SALE—14-28 Avery 1920 tractor, used only a short time. Pishny & Sons, Cleburne, Kans.

FOR SALE—Lalley farm light plant, Model F, with sixteen-cell battery. Math Kretschmer, Oriska, N. Dak.

FOR SALE—30-60 Hart-Parr in good order, a bargain at \$30. W. G. Crabb, Independence, Iowa.

FOR SALE—40-80 tractor and 34x58 Rumely separator. Wm. Dochnal, 447 W. Doty St., Madison, Wis.

FOR SALE OR TRADE—16-H. P. Advance, 16 Rumely, 18 Frick. Like new. Wm. Vandere, Mendota, Ill.

FOR SALE—One 8-H. P. vertical boiler and engine, in good condition. Fred J. Keppler, Luckey, Ohio.

FOR SALE—Peerless 30-46, feeder, weigher and blower. Also several complete rigs. John Adams, Charleston, Ark.

FOR SALE—25-H. P. Atlas, 40-H. P. boiler, heater, and all fixtures. Wm. Hellman, Delano, Minn.

FOR SALE—18-H. P. Minneapolis steam engine and 36x56 separator, A-1 condition. Chas. Koch, Reddick, Ill.

FOR SALE—One Case steam engine, 15-H. P.; new flues. Dallas Morris, Forrest, Ill.

FOR SALE—20-H. P. Aultman & Taylor steam engine. H. W. Balgerman, West Bend, Ia.

FOR SALE—2A Western corn sheller, dogs all complete. A. W. Weaver, Kinross, Ia.

FOR SALE—Two bull calves, one white, one red, both purebred Shorthorns. Fred Miller & Sons, Golden Hill Stock Farm, R. 10, Portland, Ind.

FOR SALE—30-60 Huber tractor, A-1 condition. Also eight-bottom plow, extra set shares. Box 77, Cedar Lake, Ind.

FOR SALE—Garden City feeder and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Four Cushman engines at last year's prices. E. D. Richardson, Cawker City, Kans.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—Hart-Parr 30-60 tractor and plow. Also nearly new crank shaft. John Uffelmann, Steeleville, Ill.

FOR SALE—Farquhar sawmill; 56-inch saw, 9x11 Farquhar traction engine. Good condition. Wm. Gill, Shrewsbury, Penn.

FOR SALE—20-40 Case tractor in good running condition. A real bargain if taken soon. Chester A. Ross, Alliance, Nebr.

FOR SALE—One 36" Minneapolis separator, complete. Must sell at once. First check \$200 takes it. Nick Stolzenberg, Austin, Minn.

FOR SALE—One McCormick eight-roll Improved shredder. Run fifteen days; just like new. Price \$500 for quick sale. W. Scott Booher, Viola, Wis.

FOR SALE—Toro motor cultivator, never been used. One Sandusky 15-37 tractor, in running order. Cressey Bros., Elwood, Iowa.

FOR SALE—20-H. P. cross compound Reeves engine; 36x60 Reeves separator and tank wagon, in A-1 running order. A bargain. John Kirgis, Rippey, Iowa.

FOR SALE—Avery threshing rig; 36x60 separator, 20-H. P. engine, return flue, steel water tank. Price \$1550 cash. Edw. Donner, Oakville, Ia.

FOR SALE—Heineke self feeders (Ohio agency). 30-32 inch Garden City, 24-32 inch Ruth, 32 inch Heineke Improved crank shaft. A. C. Staffin, Sidney, Ohio.

FOR SALE OR TRADE—Avery steam outfit. 20-H. P. engine, 36x60 separator, A-1 condition. Wanted—28-inch separator. Clyde Bell, Hoxie, Kans.

FOR SALE—Sawmill with two blades, 44 and 52 inch, new wooded, first-class order. Price \$250. H. S. Smith, Columbus, Wis.

FOR SALE—CHEAP, New and secondhand gasoline engines 1½- to 5-H. P. Also wood saws, flywheels, arbors, etc. Crabb Gas Engine Co., Independence, Ia.

FOR SALE—Rebuilt hay baler; 36x60 Advance separator; 17-H. P. Avery return flue engine. Bargain. Write for prices and particulars. Kenney Machinery Co., Indianapolis, Ind.

FOR SALE—12-20 Heider, A-1 shape, always shedded, three-bottom Janesville plow, ten-foot Grand Detour disk, new, never set up. Complete outfit, \$800 cash. F. L. Tinkle, Williamsburg, Ia.

FOR SALE—Avery 12-25 gas tractor, rebuilt, and oversize motor. Price \$600. La Crosse three-bottom self lift plow, \$125. G. E. Nelson, R. 1, Parkers Prairie, Minn.

FOR SALE—At a bargain. Three Big Four, one Number One and one Ottawa C corn shellers. Diets Machinery House, Bloomington, Ill.

FOR SALE—25-50 Aultman & Taylor tractor, used four seasons, in good condition. Would consider small tractor in trade. John Kessler, Elmwood, Ill.

FOR SALE—24-H. P. Port Huron engine; 36x60 Avery separator, in first-class condition, with new Langdon feeder. Mrs. Sarah A. Parkin, Manito, Ill.

FOR SALE OR TRADE—Avery separator, complete; 33x60, in first-class shape. Want 28 or 30 cylinder. What have you? Wm. Teal, Atlanta, Ind.

FOR SALE—Six-roll Advance husker, used two seasons, in A-1 condition and well sheltered. Price \$400 f. o. b. Robinson, Kans. Jacob Binder, Robinson, Kans.

FOR SALE OR TRADE—Paige Fairfield 6-46. Body painted artillery gray, wheels painted white. Car in good shape. Have no use for this size machine. F. H. Wilke, Beecher, Ill.

FOR SALE—25-H. P. Pitts engine, also Pitts 34x56 separator; complete. Will sell separate. In good shape and priced to sell. A. Miller & Company, Randolph, Minn.

FOR SALE—One eight-bottom Avery self lift engine plow; has plowed only three hundred acres; two full sets shares. Price \$465. Address Mrs. A. S. Burr, Bement, Ill.

FOR SALE—12-25 Avery tractor, four-bottom Moline plow, ten-foot tandem disc. All practically new. 2A Western sheller, No. 4 Joliet sheller. Harry F. Pick, Chenoa, Ill.

FOR SALE—One secondhand eight-roll new Improved McCormick shredder, \$275; one secondhand sixteen-inch Ohio ensilage cutter, in good shape, \$125. Ferd F. Althoff, Teutopolis, Ill.

FOR SALE—One Twin City 40 tractor; one 40x62 J. I. Case separator; one engine guide tender for steam engine. All in good shape. Want to quit. Thomas J. Smith, Rose Creek, Minn.

FOR SALE—20-H. P. single cylinder Nichols & Shepard steam engine, bought new in 1918. Have no further use for engine and will sell at a bargain figure. C. J. Lewis, Tipton, Mich.

FOR SALE—One Russell No. 1 sawmill, 54-inch inserted tooth saw, three head blocks, dust blower and taper sawing device. A first-class mill. John L. Taylor, Farmingdale, Ill.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—One Model C Bates Steel Mule, one Model D Bates Steel Mule, and one Auto-Fedan hay press with 8-horse engine. C. H. Runge, Millard, Nebr.

FOR SALE—20-40 Case tractor; 32x54 steel separator; self feeder and wind stacker, wagon bagger and weigher, A-1 condition. Address Carl H. Borklund, 6339 Elizabeth St., Chicago, Ill.

FOR SALE—Complete set of gears, engine parts, drive and front wheels for 20-H. P. Case engine. Two practically new tanks for 16-H. P. Reeves engine. Several good, various sized engines. Write for prices. Geo. H. Myers, R. 1, Rockford, Ill.

FOR SALE—One Model H Parrett tractor, new; one Model E Parrett tractor, two years old, prime condition, new gears; one Model C Moline tractor with plows and trucks; one new three-base, fourteen-inch Oliver tractor plow. Bargain prices on all for quick sale. H. N. Fullenweider, Waveland, Ind.

FOR SALE—50-H. P. steam Case engine and 28x50 Case separator with new Heineke self feeder, water wagon with twelve-barrel tank. All in perfect condition, good as new. The outfit is in northwestern Kansas. Price \$3000 f. o. b. Clayton, Kans. Address Chas. Wagner, Subiaco, Ark.

FOR SALE—One Birdsell clover huller. Just as good as new, used very little. Present owner wishes to dispose of same on account of not having time to go out. If interested, write Ruge & Wilke, Beecher, Ill.

FOR SALE OR TRADE—One 20-H. P. Reeves simple; one 30-60 Oil Pull; one 8-16 Avery; one 40x62 steel Case; one 32x52 Red River Special; one 22-H. P. return flue Minneapolis. Wm. Seyb, Donnellson, Ia.

FOR SALE—At all times, engines, separators, corn shellers. Nearly all makes and sizes, some little separators. Maybe I have what you want. Come and look them over, or write. Joe Preisser, Ashkum, Ill.

FOR SALE—20-H. P. Avery under-mounted, new flues, new gears; Avery 36x60 rebuilt, new belts, new weigher; new tank on wagon. Will take truck, tractor or car. Address C. H. Twiss, Tower Hill, Ill.

FOR SALE—My Dempster tubular well machine, equipped with new 8-H. P. Cushman engine and about 200 feet of casing and pump pipe. Ready to run. Price \$500. W. A. Tenney, Red Oak, Iowa.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—One brand new, up-to-date six-hole Marseilles sheller mounted on truck wagon, box elevator, long cob stacker and thirty feet of drags. Guaranteed to be O. K. Price, complete, \$475 f. o. b. car. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—One Parrett tractor, one Wallace Cub tractor; one 12-20 Heider tractor; one 8-16 Mogul tractor; one Waterloo Boy tractor; one three-bottom Rock Island plow; one three-bottom John Deere plow. Indiana Parrett Tractor Co., Indianapolis, Ind.

FOR SALE OR TRADE FOR NORTHERN WISCONSIN LAND—One 20-H. P. Russell engine, Universal boiler, A-1 condition. One 30x60 Keck-Gonnerman separator, used two short seasons, like new. New fifteen-barrel water tank complete. J. J. Hallowell, R. 3, Tuscola, Ill.

FOR SALE—A bargain if taken soon. 22-H. P. Advance engine with cab and tender, water tank, steel truck, pump and hose, 42x70 Avery separator, fully equipped. Outfit is in A-1 condition. Reason for selling. John De Boer, Grundy Center, Ia.

FOR SALE—One 35x56 Aultman & Taylor separator with Ruth feeder, out four years. Two sets of belts. Price \$800. One 20-H. P. Aultman & Taylor engine, high pressure boiler, with cab. In good condition. Price \$1400. Out eight years. J. S. Brough, Bushnell, Ill.

FOR SALE—One-ton 1919 model Republic truck, run about two thousand miles, with cab express body and stock crate, guaranteed good as new. Will be sold at a bargain price. Reason for selling, have too small a farm now. Chas. Webber, Pine City, Minn.

FOR SALE—One 36x56 Red River Special separator, Garden City feeder, Hart belt and bucket weigher and wind stacker. Belts all in good running order, \$350. One Gardner weigher, new, but somewhat shopworn, \$90. One Appleton feed grinder No. 15, \$30. All cash with order. W. E. Keller, Roodhouse, Ill.

FOR SALE—Gaar-Scott 22-, Case, Reeves, Advance, Aultman & Taylor, Rumely, 20-H. P. traction engines. Case, Rumely, Aultman & Taylor, Nichols & Shepard separators, 24- to 40-inch cylinders, all late up-to-date machinery. Write for what you want. C. A. Wiegner, Donnellson, Iowa.

FOR SALE—One Rumely 20-H. P. double traction engine; one 20-H. P. Nichols & Shepard traction engine; one 20-H. P. Baker traction engine; one 36x56 Peerless separator, complete; one 36x62 Baker separator, complete, at bargain prices. J. A. Cooper, 234-236 W. Maryland St., Indianapolis, Ind.

FOR SALE—One U. 1. 20-H. P. Peerless traction engine and Russell separator, 30x50, with feeder, blower and weigher. Also water tank and drive belt. All in good shape, ready to run. Price \$3000 for immediate sale. Booher Bros., Viola, Wis.

FOR SALE OR TRADE—25-H. P. Avery undermounted; 20-H. P. undermounted Avery; 36x60 Avery separator; 32x60 Avery separator; Peerless power press; 1918 Willys-Knight touring car; Sanders six-disk plow. Geo. Rolf, Blaisdell, N. Dak.

FOR SALE—One 30-60 rebuilt International Mogul kerosene tractor. Kept in good shape and in excellent working condition. Extension rims, six-bottom Oliver plows. Price \$1200. Also one 16-H. P. Stover portable gas engine, first-class shape. Price \$250. Arcady Farm, Lake Forest, Ill.

FOR SALE—Two hundred bushels of 1919 crop pop corn. Will sell any amount. Also repairs for 30-60 Mogul International tractor; one Bull pinion, one wrist pin bushing, one exhaust valve, two valve springs; full set of two electrodes for igniter. These parts are new, never been used. Price \$16 for complete parts. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—One 25-H. P. single cylinder, top mounted Avery engine, four years old and as good as new. Price \$1950. One 21-H. P. compound Port Huron engine. Is in first-class condition. Price \$900. One 10-20-H. P. Titan tractor, three years old and in very good shape. Price \$500. Write the Wisconsin Farm Tractor Company, Sauk City, Wis.

FOR SALE OR TRADE—Established twenty years transfer and storage business in city of twelve thousand to fifteen thousand. Four railroads and graveled public roads. Business has three trucks in first-class order and other necessary equipment. Wish to retire and move to Florida. Ennis Transfer & Storage Co., Carthage, Mo.

LE—One 16-H. P. Gaar-Scott engine and one 36x60 Avery separator with feeder and wind stacker and weigher. Ready to work. Price \$100. One 16-H. P. Stevens engine, price \$200, and one tender, price \$50. One Size Three Aultman & Taylor Clover huller, in running order. Price \$300. Carsten Holdorf, Walcott, Ia.

FOR SALE—25-50 Aultman & Taylor tractor, with extension rims. Used about thirty-five days. Fourteen-disc, two section E. B. engine disc plow. 30-60 Big Four tractor for \$950. 16-H. P. Aultman & Taylor steamer for \$650. No. 5 Geiser separator, complete, used ten days. Write immediately and save money. Can use some bankable paper. J. H. Woodward, Liberal, Kans.

FOR SALE—One 19-H. P. Minneapolis engine; one 32x54 Wood Brothers separator. Price for rig, \$1000. One 36x56 Red River; one 18-H. P. Gaar-Scott engine, \$2000. One Advance Rumely 20-H. P., run twenty days; one 40x64 Gaar-Scott separator. Price for rig, \$4000. One Joliet No. 1 cylinder sheller, like new, Price \$475. One Marseilles No. 2 cylinder sheller. Price \$300. T. J. Reinders, Mallard, Ia.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8500, half cash, balance long time. Object for selling have larger tract which desire to improve. B. B. Clarke, Madison, Wis.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5000 or more cash, balance as long as desired, six per cent interest. The pasture alone with timber on the tract would pay for it in a few years. B. B. Clarke (Old Sile), Madison, Wis.

FOR SALE—Twenty per cent discount on all sizes of Goodyear and Goodrich rubber drive belts and roll belting while they last. Rumely Special huller, \$600; 26-inch Appleton silo filler, \$200; 20-inch Plymouth silo filler, \$100; eight-roll Maytag shredder with self feeder, better than new, \$800; Staude Mak-A-Tractor, new, with hauling attachment, \$285; Steinke tractor tender, \$35; No. 10 Bowsher grinder, \$100; Humane extension feeders at twenty per cent discount. Richardson Machine Shop, Cawker City, Kans.

FOR SALE OR TRADE—Just at present I have several rebuilt and used machines, separators, steam engines, tractors, hullers and shellers. They are entirely rebuilt or overhauled, not a weak place in them. Many of them I was able to buy cheap, at pre-war prices, and am selling them at less than half the cost of new machines. Am willing to accept used machines in part payment for rebuilt ones. I've just finished rebuilding a grain separator. (Price \$1200.) It does clean, effective work and "runs like a top." Every machine guaranteed. Send for my latest price list. Drop a card to Frank Nelson, North Henderson, Ill.

FOR SALE OR TRADE—One 40-Advance cross compound. One 30-Avery undermounted. Two 22-Advance. Two 20-Advance. One 16-Advance. One 16-double simple Rumely. One 20-Gaar-Scott. A 30-H. P. Russell boiler and engine, portable, for sawmill. One Big Bull tractor, A-1 condition. A 16-inch Smalley ensilage cutter, nearly new. A three-ton Type A Avery truck. A complete line of Avery tractors and separators, new and secondhand, in stock. Also repairs for same. Several good secondhand Peoria and Hart and Simplex weighers. Also several sets of separator trucks and some double spiked Avery cylinders at half price. All machinery is here at wareroom and is either rebuilt or will be rebuilt to suit customer. Frank L. Brown, 14-16 East New St., Coffeerville, Kans. Bell Phone 1056.

MISCELLANEOUS.

WANTED—A large steam engine. Must be a bargain. Joe Plano, Plainfield, Wis.

TO SELL machinery or other property, write, C. C. Shepard, Minneapolis.

WANTED—Rocker grates, size of fire-box, 54 inches long and 28 inches wide. Mike Hey, Wellsville, Kans.

BARGAIN—Oliver No. 5 typewriter, good shape. First \$25 gets it. Derril Bull, Crawford, Okla.

WANTED—Self feeding rip saw or sawmill. State condition, trade name and price. Ruge & Wilke, Beecher, Ill.

WANTED—Kerosene tractor and separator. State condition, size, price. J. W. Dearlove, Glen View, Ill.

WANTED—Small grain separator, silo filler and corn husker. Colby & Spittler Co., Hart, Mich.

REBUILT SAWMILL, cider press, boilers, steam and gas engines. Roberts Machine Co., East Palestine, Ohio.

WANTED—Two, four and six-roll shredders at bargain prices. State condition, make and price. Ruge & Wilke, Beecher, Ill.

TRACTORS for shelling corn, etc., from \$250 and up; Waterloo Boy, Parrett, Avery, I. H. C. Rystrom Implement Co., Stromsburg, Nebr.

CYLINDERS REBORED—All kinds of tractor, automobile and stationary engine cylinders rebored and fitted with pistons, rings and pins. All kinds of repair parts made to order. Crabb Gas Engine Co., Independence, Iowa.

BOILER TUBES—BOILER TUBES—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

THRESHER BELT BARGAINS—Get our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

WANTED—To hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

FORGES AND DRILLS—Farm use sizes at bargain prices. Send for booklet. Harris Machinery Company, Minneapolis, Minn.

WANTED—To hear from party having threshing outfit or other kind of machinery for sale. Give particulars and price. John J. Black, 237th St., Chipewewa Falls, Wis.

CORDWOOD SAWS—Cordwood saws—30-inch guaranteed saw only \$8.40; 26-inch, \$6.40; 28-inch, \$7.40. Other sizes. Harris Machinery Company, Minneapolis, Minn.

WE SPLICE rubber belts, like factory job. Make light thirty-foot extension feeders. Rebore cylinders and turn pistons. Call for Supply Catalog. E. D. Richardson, Cawker City, Kans.

IT WILL BE material to the interests of threshers to get Howard prices for Shelby boiler tubes. Largest stock, lowest prices. M. E. Howard, Specialty Boiler Tubes, Indianapolis, Ind.

CLOSING OUT—J. I. Case 36x54 fully equipped and 18-H. P. engine; 18-H. P. Peerless; 25-actual International Titan, Type D; four small gasoline engines; five Parlin & Orendorff plows, safety valves, injectors, two-inch angle valves, 22½-inch separator trucks, 20-H. P. boiler. Wanted—Very small Huber boiler or Stillwater. J. N. Britz, Aurora, Ill.

SILLO FILLERS AND SHREDDERS **FOR SALE**—One Rosenthal Big 16 silo filler, used one season; one Appleton filler in splendid condition. Price \$200. One Ross cylinder cut equipped with thirty-foot pipe. Price \$150. One Rosenthal Big Eight shredder, used one season; one eight-roll McCormick shredder, in good running order. Price \$450. One factory rebuilt Big Four shredder, good as new. Write Henry A. Hellmich, Greensburg, Ind.

BARGAINS FOR CASH—Avery 1920 model 12-25 tractor with extra sand lugs, \$500; Aultman & Taylor 18-36 tractor, No. 2157, price \$950; Aultman & Taylor 30-60 tractor, number 2172, price \$1900; new Avery separator, 28x46, fully equipped; cost \$1500—price \$800; Avery Independent beam, five-bottom plow, price \$150; Avery brush plow, never used; cost \$350—\$225 takes it. All machinery in first-class condition. J. Livingston, Nebraska City, Nebr.

The Oldest Living Thing

(Continued from page 52.)

most healed over the wound made by the insertion of the board.

The measurements of the tree were made with difficulty, since it has a considerable swelling, which extends from six to eight feet up from the ground, and furthermore because of the tremendous buttresses, some of which are three to four feet deep. Dr. Van Schrenk found that the trunk of the tree, four feet from the ground, had the astounding girth of one hundred and twenty-six feet.

Professor Alphonse de Candolle, an illustrious botanist, calculated that the Santa Maria del Tula cypress might be six thousand years old. Professor Asa Gray, under one computation, estimated that it might be five thousand one hundred and twenty-four years old, and named it "the Nestor of the cypress race, if not of the whole vegetable kingdom." Both these computations would make the Mexican cypress older from one thousand to two thousand years than the giant sequoyia tree of California in the bole of which John Muir, the famous geologist and

archeologist, counted more than four thousand rings. The sequoyia, however, being trees of more rapid growth, surpass the cypress in height.

In Louisiana, according to Dr. Von Schrenk, are cypress trees which were five hundred years old when Jesus was born at Bethlehem. Some of these are in the celebrated "Eden-born brake" in Winn Parish, near Atlanta. The monarch of the brake is a tree which lumbermen estimate would scale twenty-three, thousand feet of lumber.

"Upon the whole," writes Professor Gray in his Scientific Papers, "we cannot resist the conclusion that many trees have far survived what we are accustomed to consider their habitual duration; that even in Europe, where man has so often and extensively changed the face of the soil, as his wants or caprices have dictated, some trees, favored by fortune, have escaped destruction for at least one or two thousand years; while in other, and particularly some tropical countries, a few may be traced back to twice that period.

"After making every reasonable allowance for errors of observation and too sanguine inference and assuming, in the more extraordinary cases, these estimates which give minimum results, we must still regard some of these trees, not only as the oldest inhabitants of the globe, but as more ancient than any human monument—as exhibiting a living antiquity, compared with which the mouldering relics of the earliest Egyptian civilization, the pyramids, are but structures of yesterday."

STATEMENT OF

The Ownership, Management, Circulation, Etc., of

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Signed, B. B. CLARKE, Editor.

Sworn to and subscribed before me this 25th day of September, 1920.

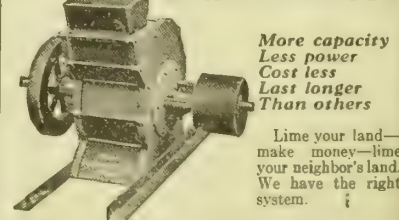
Signed, JOSEPHINE S. NELSON,
Notary Public.

(Seal)

(My commission expires November 5, 1922.)

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Than others

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DEC 29 1920

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Madison
Wisconsin


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December
1 9 2 0

Yearly Subscription Price One Dollar

Volume 23
Number 8



Using the tractor for feed grinding
GOODYEAR KLINGTITE FARM BELT
needs no breaking in

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Winter Feed Grinding—and Goodyear Belts

Many farmers agree that when it comes to exerting severe strain on belting, few farm power operations can equal the task of feed grinding, with its frequent, sudden clogging of the grinder. Then when you add the cold of a Wisconsin winter, you have a set of conditions trying the stamina of any belt.

At different times, all through last winter, Albert Guse, who farms two tracts of 40 and 170 acres near Watertown, Wisconsin, used his 75-foot endless type Goodyear Klingtite Belt in this exacting duty on the feed grinder. Though the belt was new, having been bought in October and used only in clover hulling, and the weather and drive conditions both were unfavorable, the good, staunch belt ran trouble-free and true on its task.

It needed no breaking in, but from the first day performed with the steadiness of a veteran. It was unaffected by rain or snow. It did not shrink or stiffen in the cold. It required no belt dressing, but clung to the pulleys with the power-transmitting hold of its friction stock.

Goodyear Klingtite Belts set new records in economical, efficient and trouble-free transmission of power. Whatever the job—threshing, silo-filling, or feed-grinding—or whatever the weather, they can be depended on to deliver full power and last a long time. The fact that they are unstitched tells volumes to farmers who have experienced the troubles of ply-separation.

Specified to farm power work, these belts reflect in their unfailing service and in their unvarying capacity for wear the quality of their design, materials and workmanship. Like Goodyear Cord Tires for Motor Trucks, they are carefully built to protect our good name. Farmers, generally, refer to them as "the best help on the farm."

You can obtain these belts in endless type for major tractor operations, and in suitable lengths for all other farm power needs. Their use is discussed in the Goodyear Farm Encyclopedia, a copy of which will be sent on request addressed to The Goodyear Tire & Rubber Company, at Akron, Ohio, or Los Angeles, California.

GOODYEAR
 KLINGTITE BELT

The AMERICAN THRESHERMAN AND FARM POWER



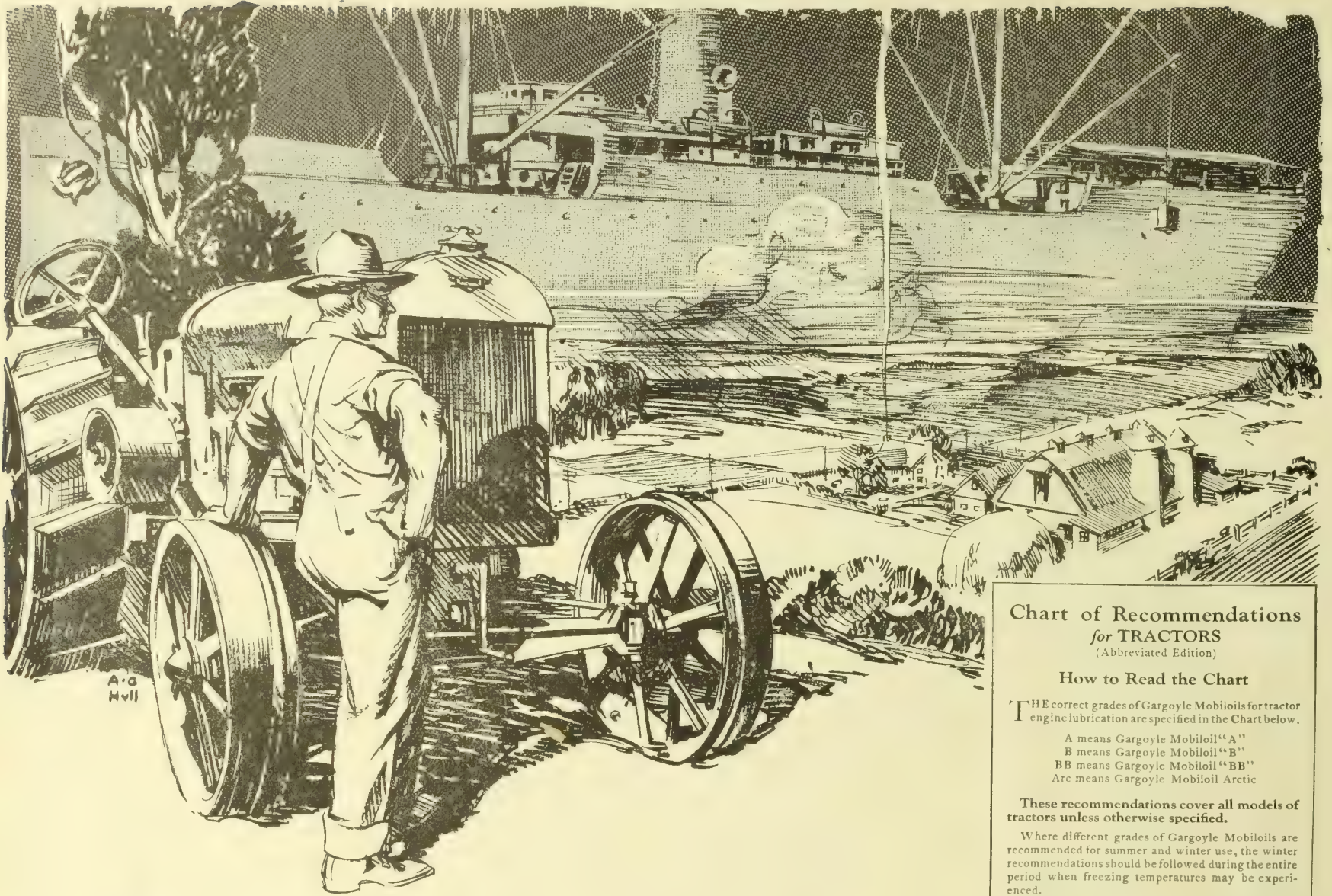
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Cummer Mfg. Co.....	45	Manhattan Electrical Supply Co.....	52	Wise, O. B., Pulverizer Co.....	27
Dickinson, Albert, Co.....	32	Manzel Bros. Co.....	44	Wood Bros. Thresher Co.....	44
Dixon, Joseph, Crucible Co.....	21	McCullough Mfg. Co.....	36		
Dues, J. J., Machine Co.....	54	Minneapolis Threshing Machine Co.....	35		
Durable Tire & Rubber Co.....	55	Munn & Co.....	27		
Enterprise Co.....	60	Myers, F. E., & Bro.....	21		
Evans, Victor J., & Co.....	56	National Good-Wear Tire Co.....	27		
For Sale and Want Department.....	59	National Refining Co.....	24		
Frick Company.....	15	Norma Co. of America.....	33		



The Work must Go On

LESS than a year ago the World's insistent clamor for food outvoiced all other problems. Today that cry is fast being stilled. From every port of America, ships groaning with their burden of plenty, bear to the four corners of the World tribute to the ability of the American farmer.

Another task is well done.

By enabling one man to do the work of many, farm machinery has played a leading part in the accomplishment of this task. The tractor particularly often determines the financial success of crops.

The tractor works an average of but 90 days in the year. During this time, however, a breakdown might turn a year's profits into losses. When called upon the tractor must deliver unflinching power.

Despite constant improvement in design, the efficiency of tractors, as of all

machinery, depends ultimately on the care it receives. In this connection, it is significant that prominent engineers state: *Over 50% of all engine troubles on tractors are due to faulty lubrication.*

The World over the Vacuum Oil Company is recognized as a leader in the Science of Lubrication. Our Board of Automotive Engineers has constantly been in intimate touch with tractor developments. The results of their wide experience have been incorporated in a booklet on Correct Lubrication for Tractors. This booklet explains in simple language the more important causes which lessen the efficiency of your tractor.



Mobiloids

A grade for each type of motor

In buying Gargoyle Mobiloids from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC	New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
BRANCHES:	Boston	Pittsburgh	Chicago	Indianapolis	Des Moines

Chart of Recommendations for TRACTORS (Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloids for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloid "A"
B means Gargoyle Mobiloid "B"
BB means Gargoyle Mobiloid "BB"
Arc means Gargoyle Mobiloid Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloids are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for all Tractors.

Tractor, 1922	1920		1919		1918		1917		1916	
NAMES OF TRACTORS	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
All Other Models (General Purpose)	A	A	A	A	A	A	BB	A	A	A
APW-48	BB	A	BB	A	BB	A	BB	A	B	A
Applon	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 10-14-18-24	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 24-30	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 30-36	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 36-42	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 42-48	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 48-54	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 54-60	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 60-66	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 66-72	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 72-78	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 78-84	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 84-90	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 90-96	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 96-102	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 102-108	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 108-114	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 114-120	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 120-126	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 126-132	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 132-138	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 138-144	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 144-150	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 150-156	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 156-162	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 162-168	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 168-174	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 174-180	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 180-186	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 186-192	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 192-198	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 198-204	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 204-210	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 210-216	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 216-222	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 222-228	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 228-234	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 234-240	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 240-246	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 246-252	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 252-258	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 258-264	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 264-270	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 270-276	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 276-282	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 282-288	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 288-294	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 294-300	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 300-306	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 306-312	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 312-318	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 318-324	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 324-330	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 330-336	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 336-342	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 342-348	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 348-354	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 354-360	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 360-366	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 366-372	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 372-378	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 378-384	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 384-390	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 390-396	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 396-402	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 402-408	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 408-414	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 414-420	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 420-426	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 426-432	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 432-438	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 438-444	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 444-450	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 450-456	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 456-462	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 462-468	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 468-474	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 474-480	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 480-486	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 486-492	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 492-498	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 498-504	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 504-510	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 510-516	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 516-522	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 522-528	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 528-534	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 534-540	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 540-546	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 546-552	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 552-558	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 558-564	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 564-570	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 570-576	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 576-582	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 582-588	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 588-594	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 594-600	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 600-606	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 606-612	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 612-618	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 618-624	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 624-630	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 630-636	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 636-642	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 642-648	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 648-654	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 654-660	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 660-666	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 666-672	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 672-678	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 678-684	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 684-690	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 690-696	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 696-702	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 702-708	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 708-714	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 714-720	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 720-726	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 726-732	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 732-738	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 738-744	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 744-750	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 750-756	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 756-762	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 762-768	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 768-774	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 774-780	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 780-786	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 786-792	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 792-798	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 798-804	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 804-810	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 810-816	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 816-822	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 822-828	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 828-834	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 834-840	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 840-846	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 846-852	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 852-858	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 858-864	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 864-870	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 870-876	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 876-882	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 882-888	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 888-894	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 894-900	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 900-906	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 906-912	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 912-918	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 918-924	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 924-930	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 930-936	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 936-942	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 942-948	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 948-954	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 954-960	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 960-966	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 966-972	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 972-978	BB	A	BB	A	BB	A	BB	A	A	A
John Deere 978-984	BB	A	BB	A	BB	A				

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, DECEMBER, 1920.

No. 8.

A New Use for Steam

*Stump Pulling Invention Combines Steam
Power with Track-Layer Tread*

lubricating oil a day, and it moves forward and backward, on the track-laying device, by its own power. Dynamite was used on a few of the largest stumps, and the demonstration proved, to the men experienced in land clearing, that it will be economical to supplement the work of the machine by blasting.

The pulling or drawing power of the Bissell machine is used from the two sides of it simultaneously. This means that, weight considered, it has a tremendous stability. The strains, to right and left, counteract each other. At least twelve stumps can be drawn from each side with one winding of the pulley-drum, some of these stumps being four feet in diameter.

The land on which the machine received its first public test, on its eighth day of operation, was cut-over at least ten years ago. Most of the stumpage is pine, and the soil is sandy loam that, to a wheat-belt farmer, appears very sandy. It was the opinion of Ralph Skidmore, who has supervised much of the work of the Marinette County Land Clearing Association, and of Henry Albright, for thirty-six years inspector of lands for the Soo Railway, that this stump-pulling machine has power and economy in operation to make it practicable in any combination of soils and timber to be found in Wisconsin.

The cost of operation is confined to the twelve men who compose the regular crew, and to depreciation, with a small amount added for lubrication, insurance on employees and breakage. The present pay-roll costs Doctor Bissell about sixty dollars a day. The crew can clear ten acres of stumps each working day, leaving the stumps piled in long windrows. Three-fourths of the cleared land is ready for leveling and cultivation as soon as the stump-puller has passed.

The work requires some skill and involves a certain amount of danger. The men who attach the

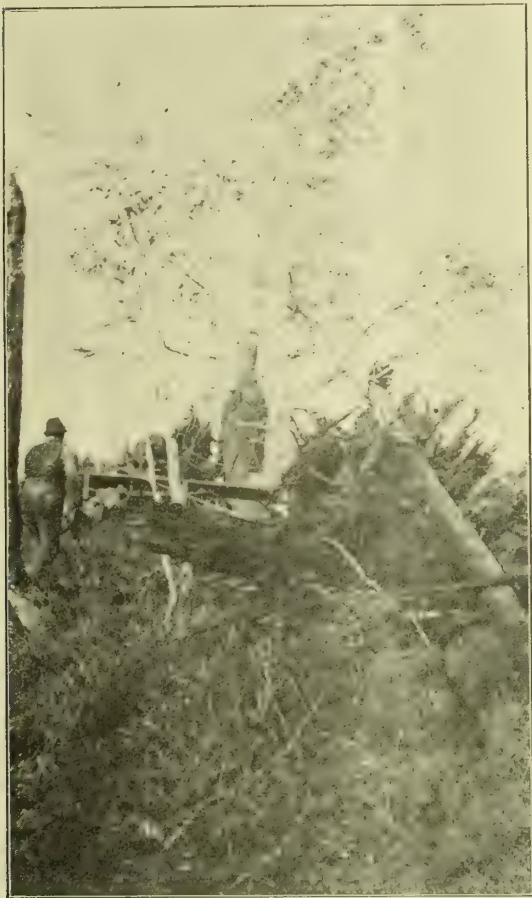
small cables, hooking their ends into the eyes of the larger cables as the drum winds the largest cable, dragging the whole mass of stumps, logs and saplings toward the machine, must be alert. Their work requires their stepping about in the space between the slow-moving stumps and the machine. A quick turn-over of a large stump or a snapped cable might involve serious consequences.

The value of this stump-puller and its possibility of revolutionizing land-clearing methods lies in two factors—time-saving and economy.

With other methods of land-clearing, such as brushing or dynamiting, the removal of stumps becomes a big problem. With the Bissell machine, the new farm can begin to produce at once. A large portion of the tillable ground is free from debris.

It has been figured that clearing by dynamite costs about thirty dollars an acre. This allows a low wage rate. The cost of the method followed

(Continued on page 51.)



This Large Stump Is in the Process of Being Uprooted. Ten Seconds Before This Picture Was Taken the Ground Was Smooth. The Young Birch Trees Are Being Toppled Over.

LAND clearing enthusiasts assembled at Holcombe, Wisconsin, on October 29 to watch the workings of the new machine of Mr. Wayne W. Bissell, Rochester, Minnesota. Before leaving, these men were practically unanimous in declaring the Bissell steam engine, mounted on caterpillar tread, the greatest stump pulling device yet invented.

The machine received a thorough test. Moving slowly through cut-over land, it cleared a swath of stumps about two hundred feet wide. It created a lane of cleared land at the rate of two hundred feet an hour, thus sustaining the claim of its inventor that it can clear an acre an hour.

Fifteen men comprised the crew. Two men kept engine and boiler supplied with fuel and water, two men worked the drums on which the long cables were run out and drawn in (one at each side of machines), two boys handled the two horses used to drag the cables out, and the other nine men worked at fastening and unfastening the small cables which were attached to stumps.

The first machine used for stump pulling operations in the Chippewa Falls section weighed one hundred and ten thousand pounds, and was so unwieldy and expensive in operation that its use was abandoned. Doctor Bissell's machine weighs thirty-seven thousand pounds, burns waste wood, uses less than a quart of



The Drums Are Turning, the Stumps Are Moving.



The Machine Surrounded by Upturned Stumps.

Good Taste in the Land of Toys

By F. H. SWEET

AS Christmas draws near, I love to recall the time when, as a little tot, my father took me through a large toy factory at Springfield, Massachusetts. It was a veritable fairyland for a child. Workmen were everywhere busy turning, painting, gluing and assembling the toys. The warerooms were piled high with toy wagons, hobby horses, jumping-jacks, mechanical toys, dolls and all the other wonderful things that find their way to show windows and Santa Claus's pack in December. I had an advance glimpse of Christmas.

When we were through, the man who had been showing us around asked me which one of all the things I had seen I would rather have. My memory was crowded with big and little dolls, doll houses, doll carriages,

doll pianos and a hundred other things, but for some inexplicable reason I chose a gaudy, flimsy toy railroad train, with a wooden locomotive and two cars. I took my treasure home, and for a few days the house was a more or less uninhabitable railroad system. At the end of that time the fragments were gathered up and I saw them no more.

That is the usual fate of the majority of Christmas toys, I fear. The more intricately wonderful they are the sooner they come to an untimely end. A little care in the selection of children's toys as Christmas gifts is well worth while, so make a search for toys that will amuse, and instruct, and survive.

Dolls, of course, are always acceptable to little girls and these are usually carefully treasured; if well

made they may last until outgrown. Elaborate beauty, however, is not the desideratum. How many of us have loved rag dolls—even we little boys—that no fine lady of wax could ever supplant in our affections. Our grandmothers probably knew no other kind.

But it is toys of another sort that I have in mind—durable toys that hold the interest for years because their appeal is simple and direct. Old-fashioned alphabet blocks and Noah's arks are the type, and these have been vastly improved upon of late years.

Incidentally, the educational value of toys should not be lost sight of. By this I do not mean tool chests and paint boxes, which have their own value, but toys which are definitely and ultimately toys.

In Austria, Germany, and England, of late years, prominent artists have found toy designing worthy of their best efforts; examples of these have appeared from time to time in the art journals. They are chiefly quaint figures of men and animals, sometimes conventionalized, sometimes grotesque, but always well done and possessing artistic merit. Above all they are amusing, and to the child mind permanently interesting, like Mother Goose and Alice in Wonderland. They are on a par with the work in nursery decoration and furnishing done by such artists as Carl Larssen, Walter Crane, John Hassall and others.

Germany and Austria, by the way, are the source of many of our best toys. While there are many big

(Continued on page 51.)

Uncle Sam's Elk Herds

By EARLE W. GAGE

UNCLE Sam has one of the largest and rarest herds of elk in existence today. The Yellowstone National Park is the center of this reserve, and it is only because far-sighted conservers of our national resources, headed by Theodore Roosevelt, placed this district under the restricted area of the native herds, that the present herds are possible.

Formerly widely distributed, the elk have been progressively exterminated or crowded back into limited areas until the fear that they are going the way of the buffalo, unless some action to give them needed lands at once, has a very real basis. Experts of the Department of Agriculture advise that if the proper steps are taken immediately, it is not too late to save and perpetuate these herds in goodly numbers. But

unless these steps are taken, the remaining large herds will dwindle to insignificant numbers, and eventually disappear. Thus would be lost an opportunity to conserve a valuable national asset and Santa Claus would be dependent entirely on Alaskan reindeer for his Christmas hauling.

There are about seventy thousand elk in the United States. The largest herds are in the Yellowstone National Park and the surrounding national forests. Other important herds are the Sun River herds of some two thousand five hundred head in the Lewis and Clark National Forest of Montana; the Olympic herds of Roosevelt elk, comprising some seven thousand head in the Olympic National Forest of Washington; eighteen hundred in the White River, eight hundred in



Santa Claus Might Get Some Steeds Here.

the Battlement, and five hundred in the Gunnison National Forests, Colorado; two hundred in the Boise National Forest, Idaho; and the small herds of the Selway and Clearwater National Forests, Idaho, aggregating a total of about thirteen thousand five hundred animals.

In addition, small native herds, or herds built up by restocking and aggregating from twenty-five to five hundred animals, are found in many other national forest reserves. Then there are several private herds on large estates in the East.

Of greatest importance are the elk herds of the Yellowstone National Park region. Here Uncle Sam has the largest number of animals and the largest remaining area of public land suited to the perpetuation of elk in large numbers in their natural haunts. The mountains at the headquarters of the Yellowstone and Snake rivers have long been the resort of a great number of elk.

In the region now comprising the Yellowstone National Park and the surrounding national forests, the elk early found an ideal summer home.

In fall they drifted out of the mountains ahead of the storms and snow, scattering over the bordering open valleys and plains where the snowfall was light and where nourishing dry grasses were plentiful. At this season they often worked their way from one hundred to more than two hundred miles from their summer feeding grounds. In spring they followed the melting snow back to the high mountains above the zone of annoying flies, where the climate was cool and refreshing and where fresh and succulent feed abounded.

Then came settlers with the activities of civilization, in many ways so disturbing to wild life. Their fields occupied lands formerly the winter home of the elk; their fences obstructed free movement, especially in the fall and spring migrations; and their introduction of domestic stock consumed the winter feed of the elk. With the increase of livestock on the ranges, a growing conflict resulted between the interests of the elk and those of the stockmen. As a result, the elk were

(Continued on page 52.)



A Poor Christmas for Elk.

Threshing De Luxe

North Dakota Scorns the One-Ring Outfit

DURING a trip through Iowa and Minnesota, one of Uncle Sile's editors asked frequent questions about the prices being charged for threshing. The time was August, 1920.

Nearly always the questions were answered in roundabout fashion. "Well, last year we threshed oats for three cents, but this year we'll have to charge four cents," was one answer often given. In the rich farming section around Waterloo, Iowa, almost every threshing crew visited was a "ring" crew, where the farmers owned shares in the tractor and separator, furnished fuel and oil, traded labor, and thus tended to keep threshing figures at a minimum.

It was after a week of this sort of travelling that I chanced to hop onto a truck with a young farmer in southern Minnesota. In our talk about threshing, he made the casual remark that he was quitting his job to go home, where he would be his father's engineer during the threshing season.

Without thinking of locality, I remarked, "And what will you charge per bushel for wheat threshing?" "I'm not sure what Dad will charge," he replied, "about twenty-six cents, I think. He charged twenty-four last year."

Clearly my companion had not understood me. I grasped the truck seat more firmly, prepared to repeat my question. Then I decided to ask another question.

"Where does your father live?"

"In the northwestern corner of North Dakota."

When a man is on an article hunt, the unusual always commands his attention. A North Dakota thresherman in his native state may be a common figure. Remove him to Wisconsin—in an editorial way—and he has great news value, because he is a rare specimen.

So you will understand why I produced a note-book and proceeded to get a story.

Nels Lien came to North Dakota in the days when the open range was considered a God-given thing, bound to last forever. He was one of the big stock men who looked with disfavor on the grain farmers who began to follow the stock men in the settling of that section. But Lien saw the coming changes and adapted himself to them. He became a grain farmer, fenced his stock land, and today farms eight hundred acres of land that no longer commands a fenceless vista to the Canadian border.

It is only fair to Lien as a stockman to mention that he owns one hundred and sixty head of cattle. He can still be classed as a stock man, all right.

Yet wheat-raising became his big job. Now, labor is scarce, farms are large, in the country along the Canadian line. Threshing "rings" are not practicable.

As a large-scale wheat grower, and a man with a love of power machines, Lien entered the custom threshing business.

Entering the threshing business in the Bowbells, North Dakota, section, is slightly different from becoming a thresherman in Michigan or Kentucky. For one thing, the thresherman assumes somewhat the character of a "capitalist." He employs labor on a large scale. He buys a movable cook-house, and a bunk-car, and a lot of things that an Illinois thresherman would consider useless luxuries.

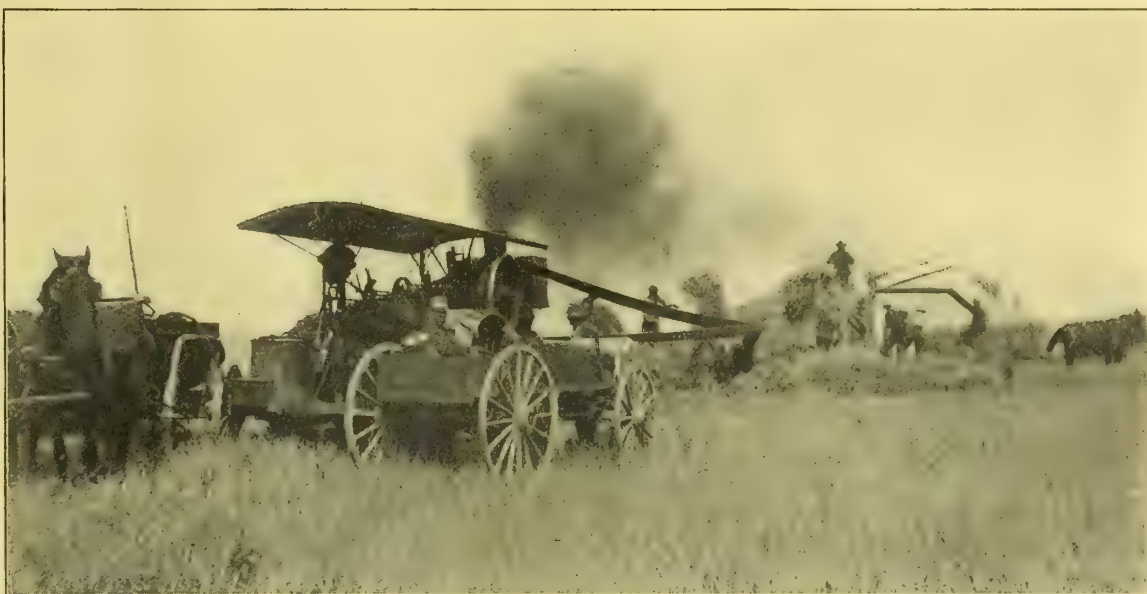
Lien's season is not of remarkable length. According to the statements of his son Reuben, it averages six full weeks, or thirty-six threshing days. The average threshing run in Wisconsin is twenty-four days, in Kansas about thirty days, so the length of the season is not much greater than the average for grain states which hold to different threshing practices.

The North Dakota outfit is not particularly large or expensive. The Lien rig consists of a 36x62 separator and a 25-horse power steam engine. Recently I talked to an Illinois custom man who uses practically the same-sized rig.

But that pay-roll! No wonder Rube told me that Nels sometimes lost one hundred dollars a day, when the wheat was very thin, or the weather acted bad; but wait—read the list for yourself.

PAY ROLL, HEADQUARTERS COMPANY

1 Separator man.....	\$10.00
1 Engineer (Rube himself).....	10.00
1 Fireman (Rube's assistant).....	7.50
1 Asst. separator man.....	6.50



Rube Lien Likes the Smell of Gasoline but He Prefers the Steam Engine for the Big Jobs.

1 Cook (a good one, too).....	8.00
1 Flunkie.....	5.50
1 Straw monkey (human).....	6.00
2 Field pitchers.....	6.00
4 Spike pitchers.....	6.00
10 Bundle wagon teams, with drivers @ 7.50 each.....	75.00
1 Tank man.....	5.50

Total wages, 24 men— \$146.00

After checking this list with Rube, I didn't wonder that there were comparatively few threshermen in North Dakota. I marveled that anyone was willing to run the risk.

It sounds like the big tent for sure—a real three-ring circus. When Rube starts from the old home-stand, to begin the autumn run, his engine is pulling the tender, separator, cook car, bunk car and feed rack. A stranger in the Bowbells country must feel that a freight train has decided to leave the railroad right-of-way for the prairies.

The average wheat farm in Rube's section has three hundred and twenty acres, and the crew

tries to clean up a half-section each day. As wheat land here averages about thirteen bushels per acre, the crew will thresh over four thousand bushels a day, and will make, in gross income, about a thousand dollars.

As we pointed out, the pay-roll calls for about one hundred and fifty dollars a day. Add to this the food, fuel, cost of equipment and depreciation, and you can see the owner of a big outfit runs considerable risk. An unfortunate week will take all the joy—and profit—out of the whole season.

In the Bowbells section, the threshers make two "set-ups" to each quarter-section. Practically everything is threshed from the shock, so time and distance from the fields to the machine are considered closely. Except for flax, which is occasionally raised on new ground, and a few feed oats, all grain is wheat.

North Dakota is the leading state in production of spring wheat. Present estimates for 1920 crops indicate the state will produce eighty million bushels, which means that, excepting Kansas, it has produced more wheat than any state in the Union.

Some bold men must shoulder the responsibility of running "three-ring" threshing outfits. Without them, the wheat production would not keep pace with our growing population. Nels Lien and his son Rube are doing their share. All the wheat farmer has to do is to pay the price.

Since I talked with Rube, another threshing season has come and gone. Rube has once more handled the throttle for a long, hard run and I'd like to be able to question him about the comparative costs of 1919 and 1920.

For one thing, it would be interesting to know what employer's liability laws a big thresherman such as Lien must face. With the progressiveness North Dakota has shown in its statutes, no doubt there are such laws. That would mean that the big thresherman

must allow a considerable amount, each season, to cover the possibility of accident to his numerous employees.

Experience in other states has taught the threshermen that it is cheaper for them to form their own coöperative, mutual insurance associations rather than to buy protection from some stock company. It seems the North Dakota rig owners are realizing this. They now plan to form a state brotherhood and insurance society early in 1921. The success of the Traill County organization, during the summer of 1920, has encouraged the men who had the foresight to plan it to proceed with the organization of a state brotherhood.

With North Dakota's immense wheat yield, its progressiveness, and its big outfits, the success of such an association seems assured. When the prospective brothers get together, it is to be hoped that the big rig men will not overlook the needs of the small rig men. All must work together.



Not All English Farms Are Small. This One Keeps Five Binders Busy.

Hampshire Farmer Gives Advice

An Englishman's Views on American Tractors

By ARTHUR G. BLACKMUR

IT was of the vintage of 1911. No, not wine, although England is still wet; it was an American car. It was taking me out of Basingstoke, Hampshire, along the wonderful roads of England.

Here and there, the highways were overhung with trees, with hedges on each side. The driver believed in "stepping on her tail," and although he claimed thirty miles to the gallon, the old bus still had plenty of power. Thus was I taken out to see an American tractor in an American car. If Uncle Sam's tractors stand up like his cars have done in this country, there will be no kick coming, and Cousin John will be back for more.

After riding for about an hour we arrived at Ashe Warren, the farm of M. Martin, whose agent or farm manager is Mr. Norris. I poked my head into the dairy and it was remarkable that I got any further. Not that they had the tractor in the dairy or that I like to churn butter or skim milk, but that the fair sex was well represented. I didn't stay long, however, and was escorted to Mr. Norris by a buxom farmerette. Have you ever seen one? Well, they are usually plump, round and rosy, and wear a dentist's coat and high boots.

We were not long in finding Mr. Norris, much to my disappointment, and then my work began. I say work, for it usually is to get people (I am talking about English people) to talk. However, a surprise was in store. I opened fire. "Mr. Norris, how do you like your tractor?" It was like a red rag to a bull, only he wasn't mad. He was off singing the praises of the machine, and right here and now I take off my hat to the best little tractor booster I have met.

Mr. Norris runs a one thousand acre farm, which is largely under the plow. Now it is not a bug with Mr. Norris to have tractors; it's a financial proposition. "It is," he said, pointing to some palatial pig sties that were being built, "just as much a business proposition as they are." He then went on to point out what he meant. "Good pig-pens cost more money to build than bad ones, but the upkeep and labor costs for looking after

the pigs are cheaper. That is how I look at the tractor. It may be a bigger original investment to buy a tractor and tractor implements, but the plowing costs per acre are lower." For instance, he said that horse plowing cost six dollars and fifty cents per acre whereas tractor plowing cost four dollars and twenty-five cents. This is figuring in depreciation and replacement for both.

We wandered over to the implement shed. Mr. Norris is very proud of it and I don't blame him. The tractor was having a day off and was all covered up. We were singing the praises of the tractor in a round, he would start and I would join in the chorus. However, it began to get tame, and I asked if he could offer any suggestions for improvements. Yes, only two. One is that a different steering device be substituted for the rack and

acres. He is going to tractorize the estate on Mr. Norris's advice. Talking about other people having tractors, Mr. Norris thinks that there should be a Society for the Prevention of Cruelty to Tractors. A near-by farmer had a small tractor and put his man to plowing by piece-work. The man was a hustler—he must have been an American—he was out to make money. He tied down the governor and raced the engine away so as to get that little extra acreage a day. Consequently, the tractor broke down. Another operator filled up his grease cups but thought that by some act of God the grease would flow down like oil, and neglected to screw them down. The result was he needed a set of new bearings.

Mr. Norris watches his laborers closely and picks out any mechanically inclined. He then trains them himself. He explains the working of the engine and tractor and the handling of the implements. It is no half-hearted training he gives them, but the man is given a thorough schooling. When he is competent, he is paid the extra money that the job demands.

The future of the tractor, according to Mr. Norris, is a rosy one. The tractor in a few years will displace the horse. All the field work, heavy belt work, and hauling on the farm will be done by the tractor. The stationary engine will do the light stationary work, and the motor truck the road haulage. He had his English make of tractor out road hauling and

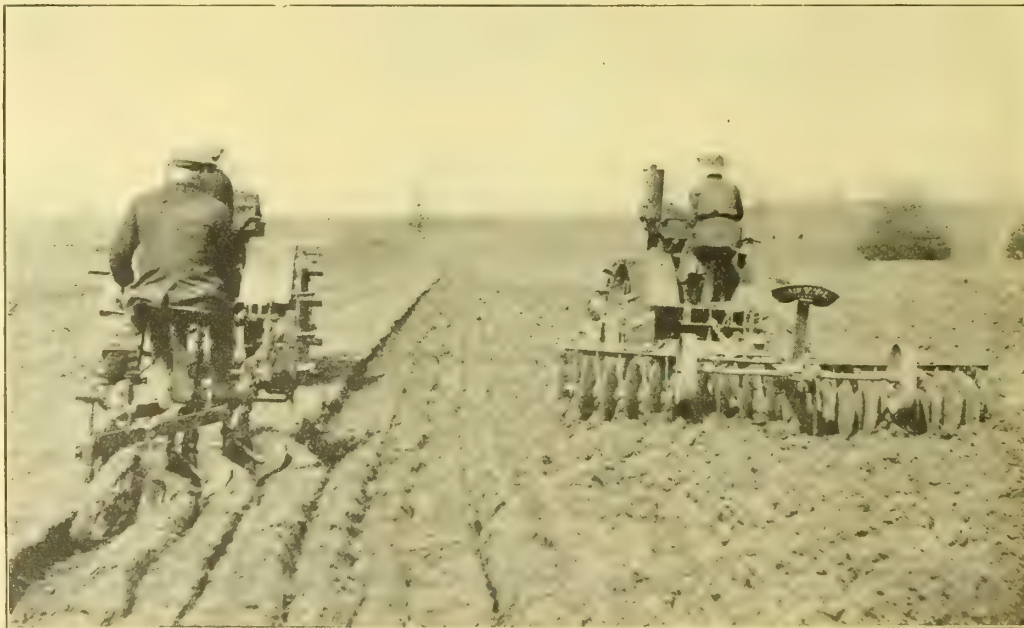
and he had a truck also. I wonder why? On asking who would do the "fiddling jobs" around the farm I received the reply, "That is a question of farm management."

By this time several people were waiting to see Mr. Norris and I had to let him go. I think that the farm will make a good training ground for tractor salesmen, especially those selling the types used by Mr. Norris.

Digging out the driver, who had been enjoying himself with dairymaids and farmerettes, we cranked up and left for Basingstoke.

It came to me very strongly as we were whiz-

(Continued on page 52.)



Two Englishmen Plow While One Farmerette Disks on This Farm.

pinion; secondly, that the driving chain be enclosed. He had found that the rack and pinion made a lot of jar on the operator's hands. This is no doubt true, and I think that it was also the cause of some broken spokes on the steering wheel I saw elsewhere. His argument for enclosing the chain is that it will keep the dirt from wearing the chain and sprocket teeth. As I pointed out, and he agreed with me, it would be a very hard thing to do this.

Mr. Norris is not the type of man to keep a good thing to himself. He has a friend who is buying up a series of farms near by and will, on completion of the deal, have thirteen hundred

How I Figure Threshing Costs

By a Minnesota Rig Owner

SEVERAL days ago I read with great interest the account in *The American Thresherman* and *Farm Power* of the thresherman who "made threshing pay." The fact that he mentioned 1915 as the year when he changed his methods struck me forcibly, for I had threshed two seasons in Canada, with a big rig (1913 and 1914) before I learned what my costs really were. In 1915 I knew what I could figure as costs and based my rates accordingly. While I threshed more grain that year, and covered more territory than in 1913 and 1914, I found my cost figures were verified by the season's work.

Since 1915 I have kept accurate cost figures. My figures for 1920 are not now in such shape that I can furnish them, but I can give the comparative figures for 1915 and 1919. Any thresherman will be able to tell whether or not his costs have risen in proportion to mine. I believe 1920 cost figures will be close to those of 1919.

Before giving these, let me tell you something about my local conditions. I thresh in Canada, where for some years I have had twelve steady customers, controlling ninety-six hundred acres. With these as a nucleus, I fill in enough places to complete a run. If I can't be sure of thirty days of threshing, turning out two thousand bushels a day, I'm sure to lose money on the season. I run a crew and spend my time in seeing that no one part of it falls down on the job, making sure that my customers have things ready for the boys to start.

I have to buy my coal and water. Hauling is a big problem. I use three water tanks, with two drivers (the third tank being always with the engine). I feed my men and must know in advance where I shall get supplies, and what they will cost. I have to do much traveling, both by myself and with the outfit. In 1915 we threshed ten sections, which lay four on one side of a main road, six on the other side.

1	2	3	4	5	6
---	---	---	---	---	---

E and W Road.

7	8	9	10
---	---	---	----

How My Outfit Must Travel

We travelled this route twice; we allowed four miles to complete a section, so that we travelled at least two times ten times four, or eighty miles.

Knowing this situation, I based my rates on the time lost in covering mileage, the food and wage costs, fuel and water prices. I figured all this on the basis of a thirty-day season, two thousand bushels per day. Here was what I got, in 1915, and I am putting 1919 alongside of it, in order to show how prices have risen:

Distribution of Expense Per Bushel		
Item of Expense	1915	1919
Coal, cost price and hauling.....	\$.0075	\$.0200
Water, cost price and hauling.....	.0087	.0125
Bundle wagons, labor and teams.....	.0375	.0675
Repair and depreciation.....	.0125	.0225
Machine men's wages.....	.0075	.0150
Food for crew.....	.0100	.0300
Total.....	\$.0837	\$.1675

These figures were estimates, later verified by my expenses, on threshing wheat. If I had threshed for thirty days, two thousand bushels per day, in 1915, I would have come out just as I figured. As a matter of fact, 1915 was a big year. I threshed thirty-six days, and ran out an average of 3,330 bushels (my best record), distributed as follows:

96,000 bu. wheat
16,000 bu. oats
8,000 bu. flax
Total.....120,000

MANY of our readers have expressed a desire for articles based on actual threshing experiences of rig owners. In this article they are getting what they want.

The writer is a man who has retired from regular farm work. He spends his winters in Minneapolis but each threshing season finds him on the job in Canada. In this article he has opened up his books for your inspection.

Before half finishing this article, you will understand why he has "made threshing pay," and why he intends to remain a custom man.

My average for the seven years (1913-1919 inclusive) was thirty-one days of threshing, average bushels per day, 2,315. The past season, 1920, was about an average year. In 1919, I threshed for thirty-three days and got an average of 2,400 bushels. These two good years pulled up my average above the fixed minimum on which I must work.

Keeping these costs in mind, the prices I charged will interest the threshermen:

Crop	1915	1919	Per cent of increase
Wheat.....	.10	.18	80
Oats.....	.07	.10	43
Flax.....	.25	.30	20

You will notice that, while my expenses doubled, from 1915 to 1919, my rate for threshing wheat raised eighty per cent, while I raised my flax rate only twenty per cent. As close as I could figure it, I broke even on my oats threshing. This was not bad business. Oats had not netted the increased profits, to my customers, that wheat had. I had to thresh oats as well as wheat, of course, in order to get the jobs. As wheat formed the greater part of my work, I could afford to do the oats threshing at cost. Everything considered, it was good business policy.

Flax could be done with less increase because there was little "deadheading." It was done all in one section of my run.

Considering my wheat charges and threshing costs, in 1915 I had made \$.0163 a bushel profit:—more than ten per cent. In 1919 I had made \$.0125 profit, actually less profit than I had made four years before.

I have never made my threshing costs known to my customers, and I wouldn't care to reveal them now. I have told several of them that I make about the same profit now, with prices almost doubled, that I did in my early years in

Canada. I think that these men believed. As a matter of fact, 1915 was a very prosperous year for me, due to the fact that, after my thirty days were completed, I had six days more of solid runs. Throughout the season I was lucky with the machines. I had good men and perfect weather, and so was enabled to make an average number of bushels (3,300) that was 1,330 bushels above the number I had used as the basis of my figuring.

The man who wrote "How I Made Threshing Pay" had the right idea. There is nothing so fascinating and easy about threshing that I, for one, am willing to keep on doing it unless I'm sure it will pay a profit. I have tried to be fair to my customers, and they seem to be satisfied with me. With things going as they are, I expect to be in the game for a long, long time.

From handling a big crew for many years, I have grown skeptical about making real money with a small-crew outfit. I once knew a thresherman in the cut-over districts of northern Minnesota whose average field was about three acres, with the total run of grain averaging about one hundred and forty bushels to the customer.

I joked with this man about his outfit. I told him he ought to get county aid from the commissioners, just like fellows who work on the roads; that I thought he was a public benefactor for doing such jobs. Yet he had some cost system of his own and insisted that he made some money for his work.

Some months ago I was interested in reading, in *The American Thresherman* and *Farm Power*, about a man named Fletcher, who had threshed ten years for the same customers. While his totals of threshed grain seemed small, and his prices were low, such a man could make threshing pay, for he could tell beforehand just what his threshing must cost.

Whether a man works a large or a small crew, the whole thing can be put in one sentence: find out what your charge ought to be beforehand, instead of after the season is over.

"No Hunting Allowed"

BY W. H. UNDERWOOD

I KNOW only too well from experience what lies behind the posted warning—*NO HUNTING ALLOWED ON THIS FARM*. I know that if there is any agent responsible for the none too sympathetic relations between many farmers and their city brethren it is the man from the city who ignores every fundamental right of those who live on farms who would make a farmer pay for driving over his city lawn but who considers it an outrage that a farmer should insist upon protecting his own property against wanton violation.

Last winter although I had my land well posted against hunting I saw half a dozen men with guns and dogs tramping over one of my fields that had been given a fall sowing of wheat. The ground had thawed and was pretty soft and I didn't like

(Continued on page 56.)

It Pays to Motorize

An Interview with an Old-Timer

By J. P. TROXELL

MOTOR trucks travel six times as fast as horses," says Frank Smith, Pearl, Kansas; "not on long hauls, but on our little trip from the threshing machine to the elevator. It beats the old system of hauling by exactly five-sixths of a mile per mile."

Smith has seen lots of hauling in his time. When he came to Kansas, in 1886, his first employer paid him eight whole dollars for a month's work. They were silver dollars, too, for this was before the time of either sixteen-to-one or dollar bills. Yet today Smith can pay out eight dollars a day for farm help; he has paid that much for labor, and has made his profit on it.

To earn a profit on high-priced farm labor, a farmer today must be fully equipped with machines that save time and work. Smith realizes this and in his threshing he has found use for that latest aid of farm power users,—the motor truck.

Most of Smith's wheat is hauled from the machine to his bins, to be hauled later to the elevator or sold for seed. Some of it, however, is hauled directly to Pearl, four miles away.

For years this haul had been made with horses, but last spring Mr. Smith bought a two-ton motor truck. At threshing time, instead of assigning two men and four teams to the job of hauling the grain from the separator, he assigned one man, the truck and one team, to the job. The team was used under the grain chute while the

truck was making the haul; on its return, the truck could easily haul the loaded wagon as a trailer, in addition to its own load of sixty to seventy bushels. It made the trip to the elevator in one-sixth of the time required by horses, and with much greater ease and comfort for the driver. Backing up to the grain chute is a hard job for horses, but easy with the truck.

While threshing in a field two miles from his house, Mr. Smith hauled the crew back and forth in the truck, saving fully an hour's time a day for each man. Of course, the truck was not stored away after threshing season, as the separator is. Instead, it has been hauling hogs, poultry, and vegetables to market, and bringing coal and supplies to the farm.

Smith has not been content with saving time and labor in hauling. A further saving of labor was effected, during threshing, by the elevator which transfers the grain from truck to bin. A small gasoline engine was used to operate this machine; it received the grain from the back end of the truck and elevated it to the bin, thus eliminating the slow and back-breaking "scooping," and entirely dispensing with the labor of one man. Many uses have been found for this engine on the farm; pumping, sawing, fanning wheat, turning washing machines—are some of the usual tasks it performs. Last year, when heavy spring rains had beaten down much of the

wheat, the engine was set on a platform which was fastened to a binder. When connected to the binding knives, it turned them at such a rate of speed that it entirely eliminated the "clogging-up" which usually delays the cutting of "down" wheat.

We have said that Smith came to Kansas in 1886 and "hired out" for eight dollars a month. At the end of eight months, his employer gave him a bonus of eight dollars. Since his only expenditures had been thirty cents (for two work shirts which, according to Mr. Smith, lasted for years,) he had over seventy dollars in the bank; and he felt like a millionaire.

That was thirty-four years ago. He now owns three quarter-sections of rich Kansas land. Not content with that, he rents another quarter-section and uses his power machinery to farm it. "I own enough machines to farm a section," Smith told me. "I might as well keep them busy."

Smith owns a truck because he is a thresherman, and he is a thresherman by compulsion. Since the farm labor shortage began to grow acute, the custom threshermen of central Kansas have found themselves swamped with work. Most farmers in that section prefer to thresh from the shock. When the draft, in 1917, began to take the young men from the farms, it was apparent that more threshing rigs were needed

(Continued on page 43.)



Trucks Haul Grain in One-Sixth the Time Required by Teams and Wagons.

TEXACO MOTOR OIL



THUBAN COMPOUND



HARVESTER OIL



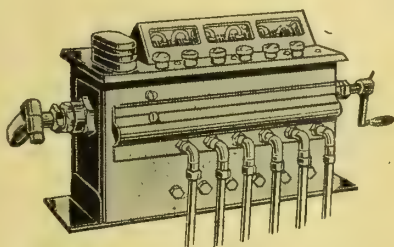
AXLE

GREASE

"I Wonder How She'll Start This Morning"

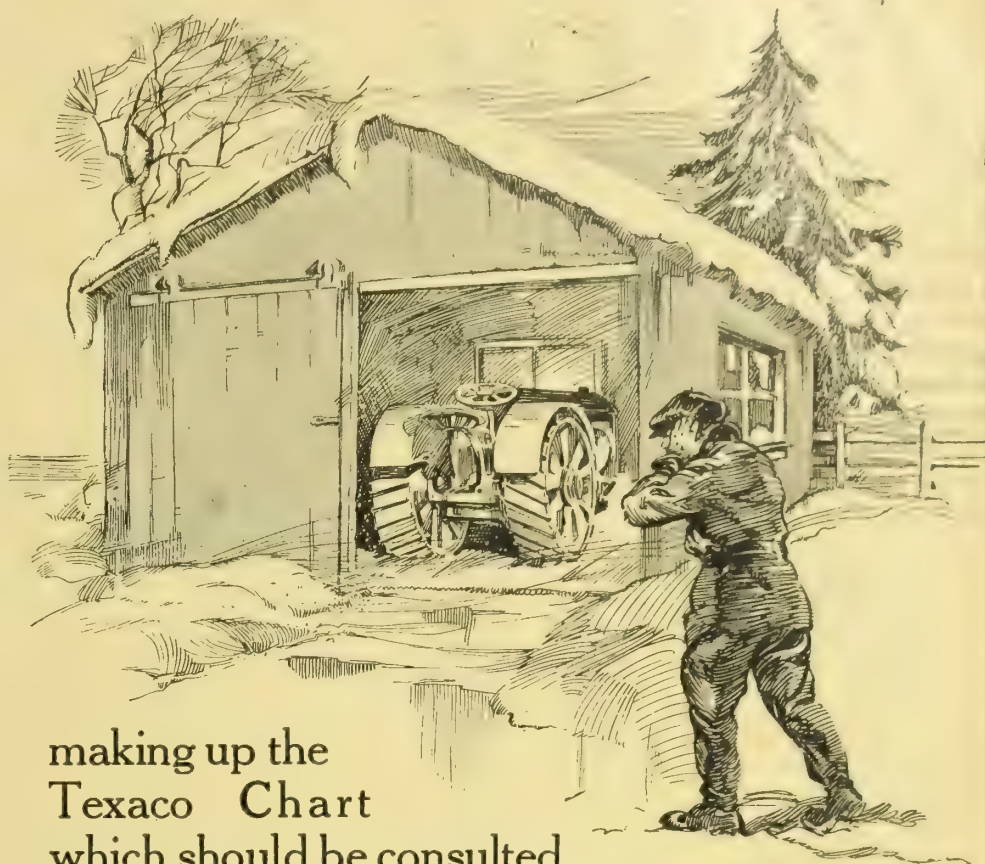
IT'S bitter cold. The snow crunches crisp at every step. Everything seems frozen into one solid piece—especially the tractor, which has been idle for hours—or even days. "Turn-

ing her over" may be next to impossible, unless you are using the proper grade of oil.



The many small pipes of the mechanical lubricator are easily clogged by the wrong oil in cold weather

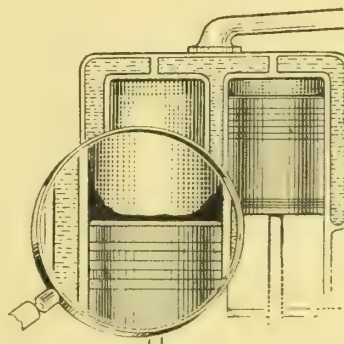
TEXACO TRACTOL is manufactured in three grades to meet the climatic and mechanical conditions for all tractor engines whether using kerosene or gasoline for fuel. It is refined especially for tractor engine and its use minimizes crank-case dilution. It burns clean without excessive carbon deposits. It is *not* automobile oil, for tractors operate under extremes of temperature and pressure too severe for Auto Oil. All operating conditions have been considered in



making up the Texaco Chart which should be consulted and recommendations followed to secure best results.

TEXACO TRACTOL comes in 33 and 55 gallon steel drums, wooden barrels, and half barrels, and five gallon sealed cans. Ask your Texaco Dealer what grade of TEXACO TRACTOL your tractor needs. He'll know.

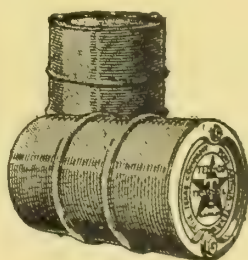
Then try it. You'll see a difference right away—and later when you overhaul your tractor.



In freezing weather the piston must really PLOW its way through oil that has congealed

THE TEXAS COMPANY, *Petroleum & Its Products*
Houston, Tex. Chicago, Ill. New York City. Offices in Principal Cities

TEXACO



TRACTOL

"There is a Texaco Lubricant for Every Purpose"

Uncle Silas

A GOOD man died and went to heaven from Madison, the other day. He had acquired riches during his busy life, in Chicago, as one of the heads of a great medical college, and he returned to his home city and built a tubercular sanitarium, helped build a Young Men's Christian Association and many other buildings of like character, until he had donated the greater part of his wealth to humanity before he went away, among these being an addition to the church from whence he was buried, followed by relatives and friends who mourn his loss. Such a man was Dr. Charles H. Vilas, and over against his name in the Book of Life has been written, "Inasmuch as ye did it unto these, your brethern, ye did it unto Me."

IT was an encouraging incident when the Tractor and Threshing Division of the National Implement and Vehicle Association entertained the representatives of thirteen states and the Dominion of Canada, representing the National Association of the Brotherhoods of Threshermen in Chicago, in November. In a retrospective view of the past twenty years, Old Sile couldn't help showing the brethren what a long ways it was that they had traveled since we all fought, bled and died in bringing the "Coxey's Army" of threshermen up to where they had learned the regular army code from A to Z, until everybody has a glad hand for them instead of treating them like "When your poor relation comes to town, the smile on your face turns to a frown." No body of men have made greater strides in the business world in twenty years than the threshermen. Allah-Kariem!

WHEN thou enterest into thy closet to pray, ask the Lord's blessing upon all of thy acts which will pass muster, and to guide thee in the pathway of righteousness according to the plans and specifications of thy nature, and not in any manner that wouldn't fit thy case. Pray that thou bellyachest not when the cards run against thee and that thou swipest not the beans from thy brother's stack nor fail to edge in thy turn instead of offering conversation in place of chips, that thy brother's opinion of thee be exalted, and not abased by reason of thy being penurious about small things. Pray the Lord to "Give us this day our daily bread," and then go out and earn it instead of depending upon others. Supplicate the Great I Am to help thee to help thyself more abundantly, instead of trying to get on the Lord's pension list. Do these things and whatsoever thy conscience tells thee is right, and thy digestion will show a marked improvement.

SILE is not going to gloat over the results of the recent election; there is nothing to gloat over; it is just the expressed will of the people, tired of the way in which the country has been mismanaged. If the new President fails to come up to the standard set for him, he will have committed a greater sin. It remains to be seen whether or not Warren G. Harding is the man whom the people believed him to be. If so, he will be considered one of the greatest Presidents in our history. If he fails, after having shown his true statesmanship during the recent campaign, he cannot ask for leniency on

the grounds of ignorance, for he is not an ignorant man, either in the law of the land, or of the social code. He must hew to the line and let the chips fall where they may, else render an account to the people four years hence.

AND then, again, as you sew so shall you rip, if the stitches don't give out.

ONE of the most gratifying compliments I ever received concerning these musings was concerning that which another wrote.

IN our dealings with others, let us try to give them at least half the hold on the stick that we demand of them when the ends are turned.

WHILE you are doing unto the other fellow as you would like for him to do unto you, keep your finger on the trigger for you can't ever tell when he is liable to lose his religion.

WHEN I was a little boy, down South, I used to hang up my stocking in anticipation of what Santa Claus would bring my way. Now, I hang them up by the radiator to get them dry and to keep from catching cold.

FOLKS call you a funny man with mighty little provocation after you've gotten your feet in the trough. It's while you are making the first grade that you need folks to grunt for you, Old Timer.

YOU can never tell which way the cat is going to jump in the business world, Mabel, but whether coming or going, always remember that it's going to jump whenever occasion arises to justify, therefore always be prepared for it.

IT required many centuries of time to wrest the Holy City from the hand of the terrible Turk, but we now have the assurance, backed by an unbroken line of precedent, that what Great Britain once gets into its keeping it holds fast to forever.

IN our driftings away from righteousness, especially since the world was baptised in blood, should we not with Isaiah pray: "O, Lord, why hast thou made us to err from thy ways, and hardened our hearts from thy fear? Return for thy servant's sake, the tribes of thine inheritance."

AT Christmas-time, when the human heart feels like being a little more flexible than during the rest of the year, we should take advantage of those spurts of human kindness and act before the powder has burned in the skyrocket of our good intentions, else the stick fall with a dull thud.

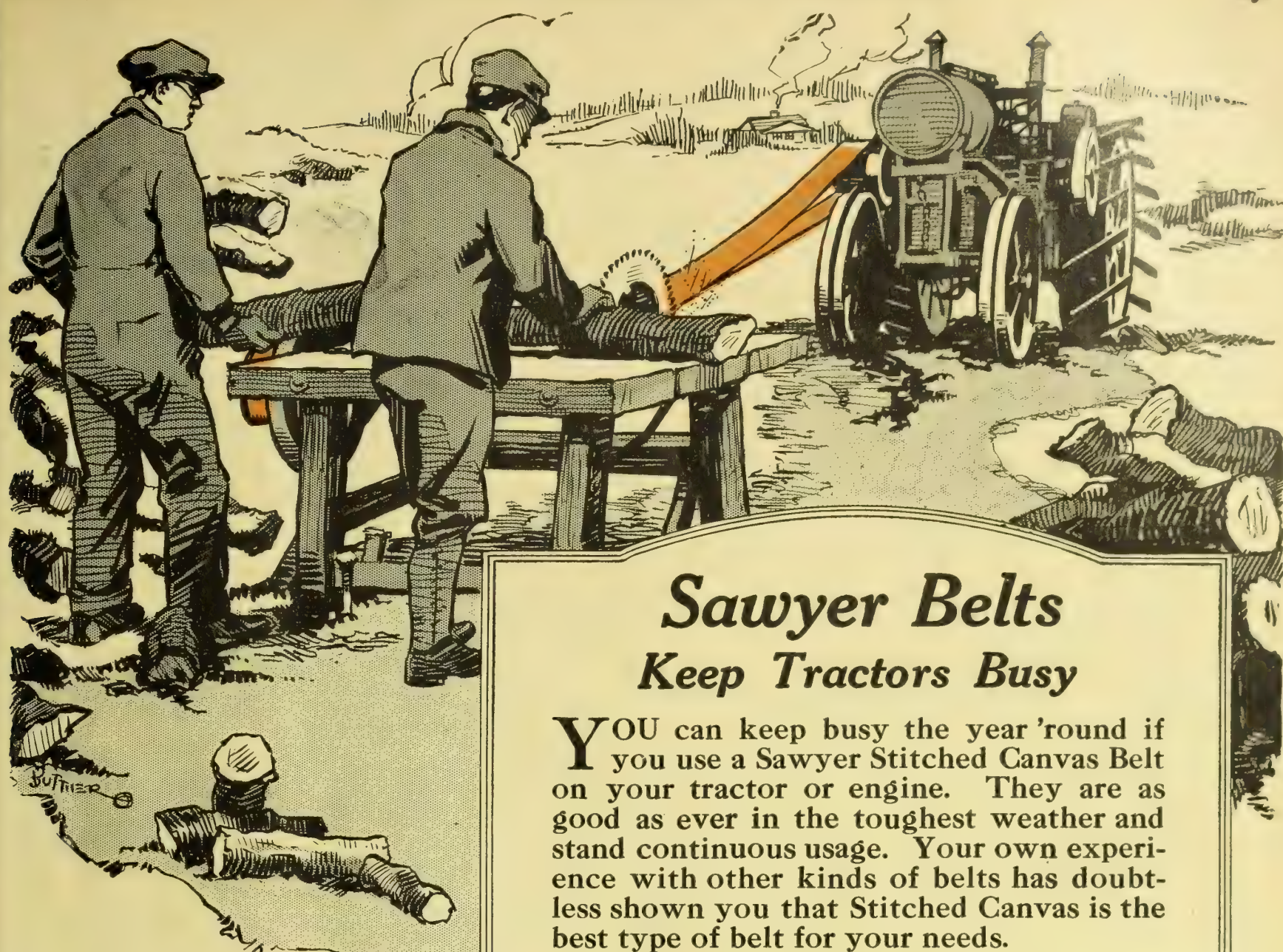
THE difference between an old-fashioned Christmas egg-nog, like "pappy used to make," and the miserable substitute that this moonshine "hooch" affords, is like an up-to-date touring car going down the valley of plenty, compared with driving a tow-headed mule up the hillside of poverty.

BESIDES being thankful to the Lord for his many mercies in our meek and lowly way, we feel a "hang-over" from Thanksgiving to this Christmastide that a little "egg-nog" would certainly help straighten out, but "Alas, poor Yorrick!" The horny hand of the law pounces upon us with its thirty-fourth degree doctrine, and we must substitute grape juice for Manhattans, and "floating island" for the egg-nog of our forefathers!

A CHRISTMAS greeting to all within the realm! The blessings of the one true God, health, happiness and prosperity be with you, and may every yoke be broken, and every cross be lightened. May the sunshine of heaven dispel every gloom, and dry every tear. May your stockings be full of every good thing, and your soul grateful to Him who has given us this grand old world with all its beautiful things, and His Only Begotten Son to intercede for us at the throne above.

A FARMER came to town the day before Thanksgiving, bringing with him two cords of splendid dry oak wood, sawed twice, without being split. He was peddling this wood for seventeen dollars a cord. When I asked him to tell me, as a brother, if he didn't consider himself a thief he held up both hands, but said, "Look what you are paying for coal!" My next door neighbor bought a cord of this wood, the kind we used to sell for three-seventy-five, sawed and split. The farmer has somewhere, somehow, at last, got the hunch from his city brother that it's a good thing to get yours while the gettin's good, and really I couldn't blame him, but this unreasonable hog-gishness has got to stop on the farm, in the city and elsewhere. No living man can afford to pay seventeen dollars a cord for stove-wood, nor one-hundred and twenty-five dollars a suit for thirty-two dollar hand-me-downs. In adjusting the commodities of life, sorter think these things over, Ezra.

WOMEN are an unknown quantity in many ways and give lots of trouble when we least expect it. Just look at Carrie Chapman Catt, who came so near wrecking the Republican party in November. She waited until just before election, when the men folks had no opportunity of corralling her, and, zip! She goes over to the Democrats in a body, and New York was carried for the G. O. P. by only a million votes! After the Civil War there was a drunken brick-layer in Colfax, who used to tell how "Me, and the Twentieth Indiana put down the Rebellion." Mrs. Catt might have been a regular mouser in the Harding reign if she had stuck to the ship, but somebody made her believe that "Jimmy Cox" was going to sweep the country like a tidal wave, and Carrie couldn't resist the temptation to ride on the crest and have her name at the top of the column next to reading matter, as the original woman deserter, and right when we needed her most. Here was an opportunity for a good woman to carve her name high up on the real bulletin board of fame but, just as one might expect, she wasn't that kind of a Catt.



Sawyer Belts Keep Tractors Busy

YOU can keep busy the year 'round if you use a Sawyer Stitched Canvas Belt on your tractor or engine. They are as good as ever in the toughest weather and stand continuous usage. Your own experience with other kinds of belts has doubtless shown you that Stitched Canvas is the best type of belt for your needs.

A *Sawyer Stitched Canvas Belt* keeps your tractor at work on sawing, corn shelling, stone crushing, feed grinding, fodder shredding and other winter belt jobs.

For 30 years Sawyer Belts have been used in all sorts of weather. They are uniform in strength and quality—resist moisture, heat and cold—have no seams to rip open.

Ask for the genuine *Sawyer Stitched Canvas Belt* stamped with the "U. S." seal. We recommend *Sabeco Belt Dressing* and pack a liberal sample with each Sawyer Belt. Good dealers carry both, also the full line of U. S. rubber belting, packing, hose and other mechanical rubber goods for farm use.

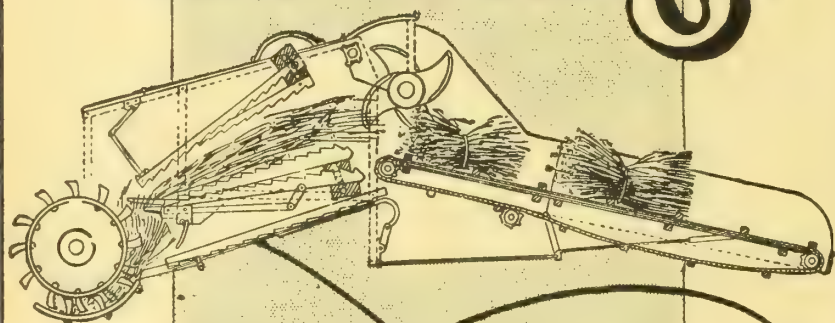
United States Rubber Company



Standard for
over 30 Years

SAWYER TRADE MARK *Endless stitched canvas Belts*
REGISTERED

A real aid to fast threshing!



THE feeder is the big thing in threshing. All farmers will agree to that. With it working smoothly, the chances for a good run are fine.

Why not, then, give your separator the best self feeder that money will buy? Give it a Garden City.

Thousands of farmers have found it a good feeder. Your experience will be the same. You'll find that it simplifies feeding and speeds up your threshing.

Branch houses and distribution points everywhere. Write for name of nearest dealer.

Garden City Feeder Co.
Pella, Iowa

Garden City self-feeder

Mention The American Thresherman and Farm Power

Pick Your Style of House

FARMERS who have been thinking of making improvements on their homes will be interested in knowing of the housing work of the Timken Roller Bearing Company. This company has just completed two hundred and eighty-five attractive, modern homes for employees in Canton, Ohio. Among the styles of houses built, you may find the one you have had in mind.

The housing situation in Canton has been so acute that it was difficult for a big company, such as Timken, to keep employees satisfied when they felt great uncertainty as to where they could secure houses. With the idea of assuring the employees of modern homes and en-

development. They are Low Colonial, High Colonial, English, Italian and Dutch Colonial. Exteriors, for diversity, have also been given three distinct treatments: stucco, shingles and clapboards. Our readers should keep these types in mind.

The streets have been laid out so that unattractive sharp corners or monotonous straight-aways have been avoided. Graceful curvings and shortened straight-aways are the general scheme of the roadways. The houses themselves have each been adapted to the particular locations for which they have been built; by appropriateness of setting, several-way exposure, and individual attractiveness.



This Street of Pretty Homes Has Been Built for Company Employees.

abling them to purchase houses on the partial payment plan, the company proceeded to buy a tract within a mile of the factory.

The entire section, forty acres in size, has been laid out in beautifully winding streets, attractively landscaped, and traversed with hard-rolled roadways and concrete curbs, gutters and sidewalks. The business men of Canton and the real estate men of Ohio have looked the development over and have pronounced it one of the finest in the state.

Every utility is in the development; improved roads, water, gas, electricity, storm and sanitary sewers, concrete curbs, gutters, and sidewalks. All roads in the development will be given a deep, gravel bed treatment, rolled and well crowned. City water and gas mains have been installed with more than adequate capacity. Electricity and telephone inlets are also in. Storm and sanitary sewers have been installed, with the best available concrete curbs and gutters, while concrete sidewalks serve every house. These utilities make this former waste land into a household community with every possible urban convenience. These have been paid for by the company.

With these conveniences provided for, the company was able, with a minimum of expense, to build a variety of compact, attractive, modern houses.

Five distinct types dominate the

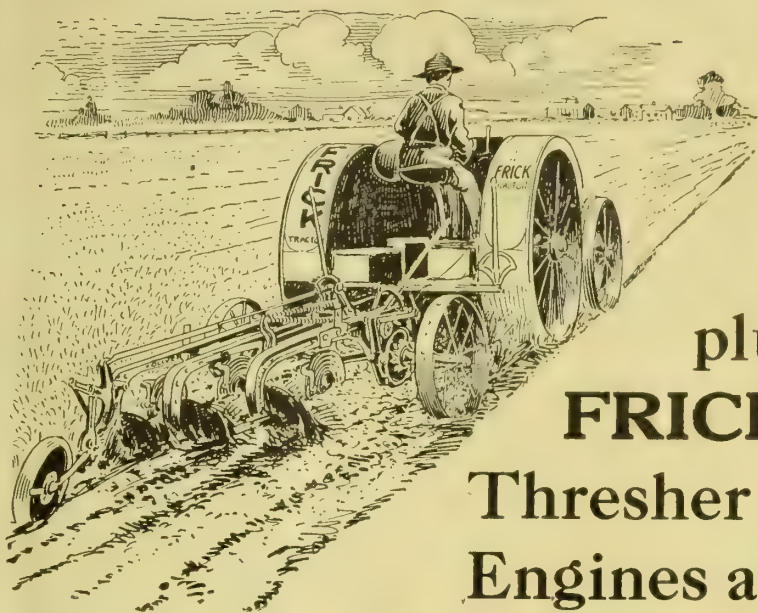
In mentioning five distinct types of houses, with three distinct methods of exterior treatment, one must not gain the impression that there are only fifteen different types of houses in the addition. Most of the houses are different as to exterior treatment and paint, also as to interior design, finish and trim. An effort has been made to prevent grouping of similar types, so as to avoid monotony.

Among many attractive houses shown us by the pictures of the tract, there are many whose arrangements and appearance may appeal to those readers who are thinking of building or improving the old home place.

While we have not heard of any extended effort being made to have plans of these homes available to the general public, no doubt any reader of our magazine who cares to write to R. E. MacKenzie, Timken Roller Bearing Company, Canton, Ohio, will be able to get plans of attractive house arrangements. This should be an inexpensive way to get plans of houses already proven economical in construction cost.

Put down what you think you are! Subtract what you really are! The remainder is the cause of most of your unhappiness.—*The Business Bringer.*

Kerosene is not as dangerous as gasoline, yet at a temperature of seventy degrees Fahrenheit or over it throws off an explosive vapor.



The **AMERICAN**
Thresherman Buys
Efficiency and Durability
plus Service when he orders a
FRICK Steam Traction Engine,
Thresher or Gas Tractor. **FRICK**
Engines and Threshers give excellent
service—have done so for 67 years.

Frick Engines
are scientifically
designed
and built of
best materials.

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boiler.

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engine.

Clearance for
belting to the
rear.

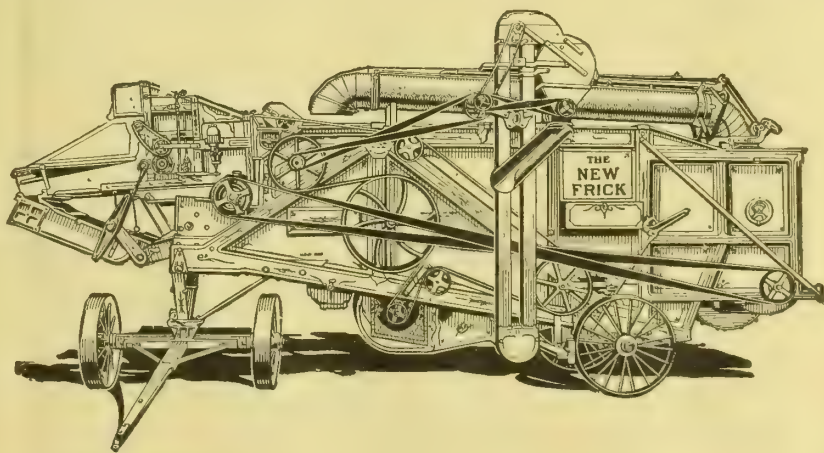
Removable En-
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617-A

The "New Frick" Thresher—an up-to-the-minute
machine—that gives excellent results.



Resolve to use **FRICK** Machinery dur-
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you keep your resolution. Write for
our new 1921 Catalog.

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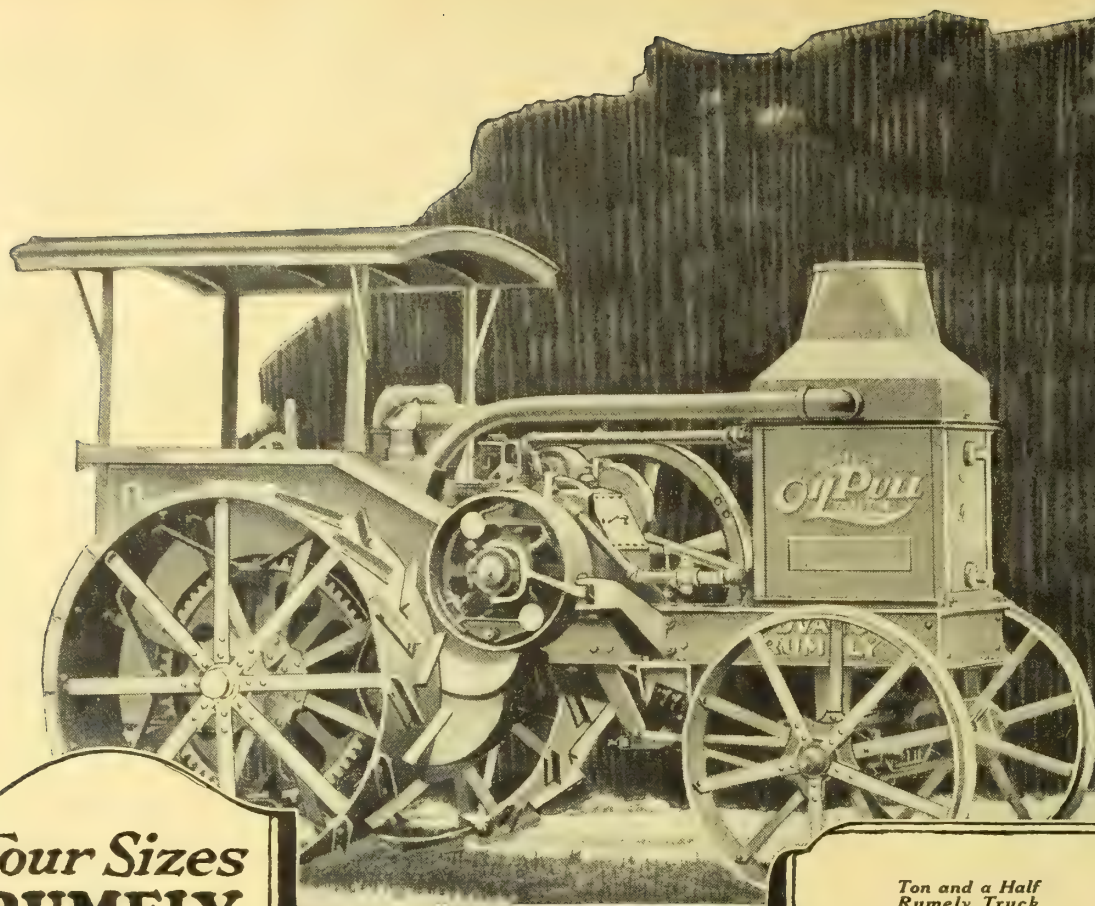
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Four Sizes
RUMELY
OilPulls -

12-20

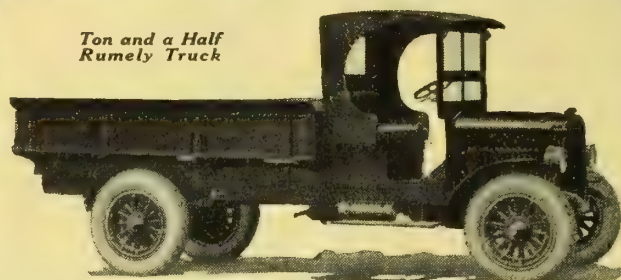
16-30

20-40

30-60



*Ton and a Half
Rumely Truck*



Farm with RUMELY

FARMING with Rumely power means service to the fullest extent. It means the work will be finished on time. It means that more work is done per man. It means, above all, the inbuilt economy, dependability and long life that will prove a profitable investment on your farm.

First, there is the OilPull tractor as your farm power unit. This season marks the twelfth year of OilPull triumph. Look over the records of every public tractor test and demonstration —then talk with any of the 25,000 OilPull owners and you have abundant proof of remarkable value of the OilPull tractor.

Both in drawbar work and belt work it has shown its supremacy. With a basic design which is distinctly its own, it has always led the way to tractor dependability, economy and long life.

Its exclusive features are many — features which can never be secured in other tractors because of Rumely patents. With every OilPull goes a written guarantee, signed by the officials of the company, that it will burn all

grades of kerosene under all conditions at all loads up to its full brake horse-power.

It is oil-cooled, not water-cooled. Over-heating, freezing, rusting, evaporation and other troubles, common to every water-cooled radiator, are eliminated.

Even the lubrication system is doubly dependable. Two systems instead of one, insure 100% lubrication at all times.

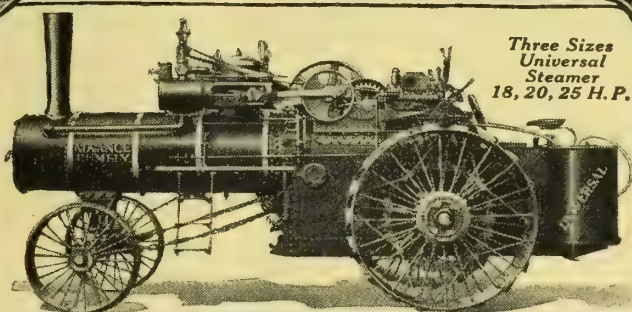
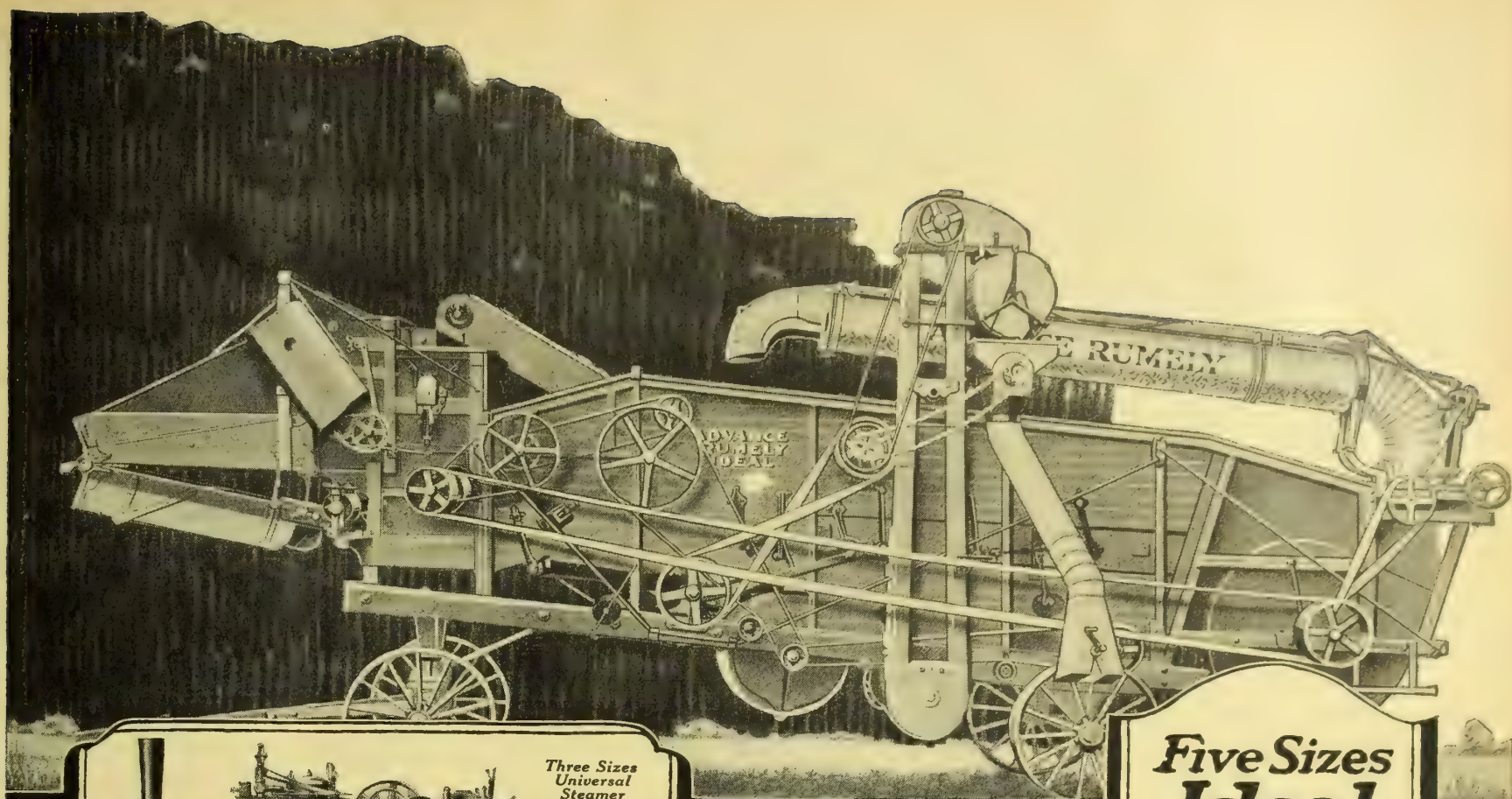


Then, there is the Ideal grain separator. 25,000 farmers and threshermen everywhere know from experience that this "Save-All-the-Grain" Ideal has never been equaled for grain-saving, clean work, large capacity and durable construction.

They know that the basic principle of design back of the Ideal success is to keep the straw constantly on the move in a steady, even flow from cylinder to stacker. That is why with an Ideal there are no delays and no damage caused by bunching, clogging, winding or choking.

A patented traveling chain rake carries the straw from the cylinder to the straw rack,

ADVANCE



Three Sizes
Universal
Steamer
18, 20, 25 H. P.

Five Sizes Ideal Separators

22X36
28X44
28X48
32X52
36X60

Power in 1921

relieving the cylinder of the usual task of both beating out the grain and throwing the straw onto the rack, and preventing choking and clogging.

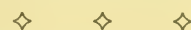
Common thresher design makes it necessary for the cylinder to perform the double task of beating the kernels from the grain and throwing it up onto the straw rack which explains the frequent clogging and choking. In the Ideal, a patented traveling chain rake carries the straw to the straw rack, permitting much of the grain to fall through to the grain pan.

Then lifting fingers on the straw rack, instead of common shakers, tear the straw apart, rake it, beat it from beneath, compelling the separation of every kernel.



The Rumely Universal Steamer is a prominent member of the Rumely line. For scores of years wherever steamers have been used, the Universal has demonstrated its unusual worth. It is recognized by threshermen everywhere as standard. It is built complete in the Advance-Rumely factories.

Highest standards of manufacture are adhered to in every individual part. And nowhere is greater steaming capacity and economy of fuel and water to be found.



The newest addition to the Advance-Rumely line is the Rumely farm truck and you may be assured that in it are found the same high standards of manufacturing excellence that for over 80 years have distinguished Advance-Rumely products.

It is a 1½ ton truck possessing characteristic Rumely reserve power. It has a worm drive that is not excelled in farm truck design. It has a motor that is built specially for heavy duty truck work on the farm.



The Advance-Rumely line also includes hoppers, plows, and other tillage implements.

When you think of truly dependable power farming machinery think of the Advance-Rumely line. Catalog upon request.

ADVANCE-RUMELY THRESHER CO., Inc.
LaPorte, Indiana

29 Branch Offices and Warehouses

RUMELY

The American Thresherman and Farm Power

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The Christmas Spirit

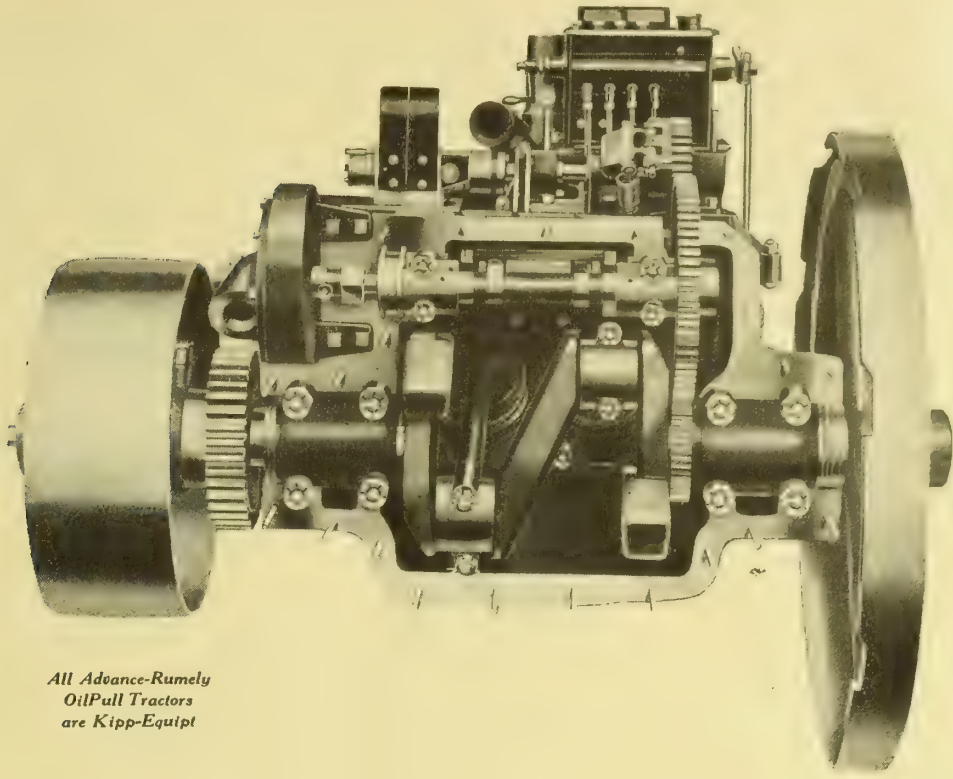
ONCE more we come to the season of Yuletide, trying to forget for a time the heavy responsibilities incident to human life, and endeavoring to partake of the pleasure that comes to every soul who tries in some way to make others happier.

We are living through one of the most trying periods of the world's history, when sin and wrong are stalking abroad as never before, robberies and holdups are a part of daily life, outrages are committed with impunity, and the price of a man's life in the cities is measured by the price of the crime. Were it not for the fact that the good among us have increased in proportion to the population of the nation, such a record would be enough to startle mankind. While the hand of every man in the business world and upon the farms seems turned against every other man, still the world is growing better. The most cruel and inhuman war in history could but leave its scars behind, and it will require time to overcome that which we ourselves taught to others while the battle raged overseas.

With the approach of the holidays, let us endeavor to emulate the example of the Founder of Christmas by taking upon ourselves the pledge of forgetfulness of every wrong that may have been committed against us, and promise Our Father Who Art in Heaven to not allow this Christmas day to pass without trying to bring a little cheer into the lives of others, especially those who have been chastened more than ourselves.

There is not a jot on record that during the short life of the Son of Man He ever offered offense to any one, and in the agony of the cross He prayed, "Father, forgive them, for they know not what they do." The example of kindness and of tenderness towards all was strikingly portrayed in the life and death of the "Gentle Nazarene," who ministered alike to Jew and Gentile, to publican and sinner, and who took little children in His arms and blessed them, saying, "Suffer the little children, and forbid them not, to come unto me, for of such is the Kingdom of Heaven." Let us follow the example of the Christ by helping to make the children's Christmas a real one, remembering that it does not require riches to do a good deed here and there along life's highway.

For ourselves, we are indeed grateful to God for the many friends we have scattered over the earth, in the country homes, in city and in shop. You have been so loyal to us in all the years that we tender you at this Christmas time greetings of good cheer from every one who forms a part of the working force of this magazine. May the Lord bless you, each and every one, and help you in some way to be happy on this anniversary of His birth.



*All Advance-Rumely
OilPull Tractors
are Kipp-Equipt*

Five Points About Better Tractor Lubrication

Years ago many tractor builders gave up the ordinary splash systems that use oil over and over, and turned to Madison-Kipp Fresh-Oil Systems. Experience had taught them the five major advantages of fresh-oil lubrication.

First, the fresh-oil system makes sure of maintaining maximum horse power. It provides a better oil-seal between piston and cylinder, and improves power conditions. In typical tractor motors the maximum h. p. is increased an average of 15% by replacing the crank-case system with a Madison-Kipp System.

Second, the fresh-oil system lowers fuel cost. The better oil-seal provided by it prevents much of the leakage of kerosene and gasoline past the pistons. A saving of fuel averaging from 13% to 17% is not at all uncommon.

Third, the fresh-oil system saves oil. It feeds oil in just the right quantities to all points requiring lubrication. Although it uses oil only once, oil savings on typical motors run as high as 83%.

Fourth, the fresh-oil system prevents the motor

"knocks" due to the fact that splash systems send too much oil into the pistons and cylinders. This excess oil causes a carbon accumulation which prevents proper heat-radiation from the piston head. The piston then heats and pre-ignites the gas. Because the Madison-Kipp system feeds just enough oil, excess "underside" carbon cannot form in Kipp-Equipt tractor motors such as that shown above.

Fifth, the fresh-oil system keeps down repair costs. Used oil is full of dust, grit and sediment. These grinding impurities are splashed into the cylinders and bearings, wear down the metal, and hasten the need of repairs. Fresh oil is free from grinding impurities and really protects the parts it lubricates.

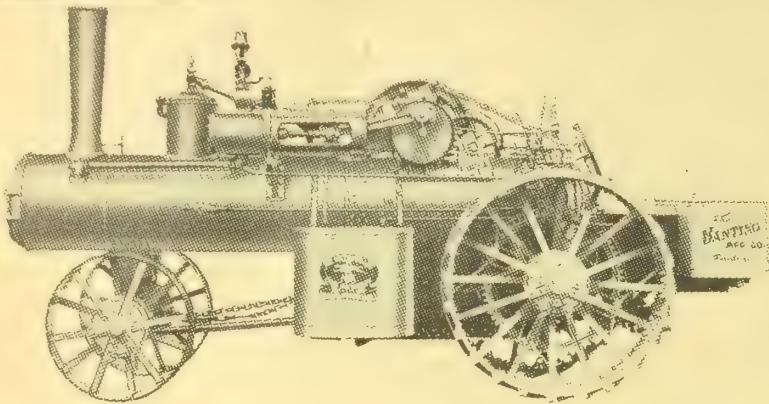
These five main advantages, and many minor ones, have for years been demonstrated in the field by tens of thousands of tractors equipped with Madison-Kipp Fresh-Oil Systems.

The natural result is a decided preference for Kipp-Equipt tractors among experienced tractor users.

MADISON-KIPP CORPORATION
MADISON, WISCONSIN

Madison-Kipp Lubricators

*Fresh
Oil
Systems*



Greyhound Engine
Built in Different Sizes

THE GREYHOUND LINE
FARM MACHINERY

Bear in mind that the values in

Greyhound
Engines and
Threshers

are exceptional. See these machines before you buy.

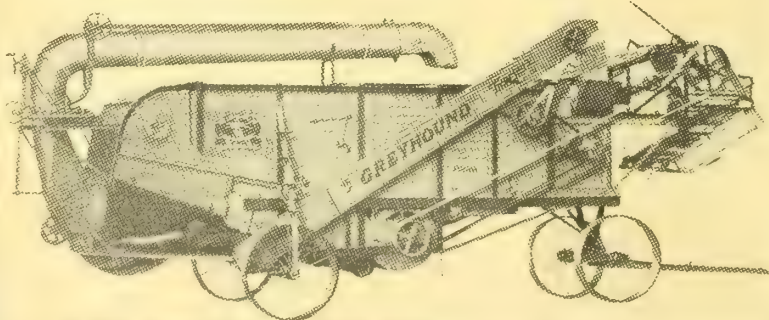
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THE GREYHOUND LINE
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Greyhound Thresher
24x40—28x48—32x54—36x58



Organization

1921 Brotherhood Convention Dates

State	Place and Date	Officer
North Dakota	Fargo, January 3, 4	H. T. Monson, Acting Sec'y
Minnesota	Minneapolis, January 4, 5, 6	E. A. Gross, Sec'y
Indiana	Indianapolis, January 11, 12, 13, 14	W. E. McCreery, Sec'y
Ohio	Columbus, January 18, 19, 20	George Durban, Sec'y
New York	Rochester, January 24, 25, 26	M. T. Small, Sec'y
Oklahoma	Oklahoma City, January 25, 26, 27	J. M. Bailey, Sec'y
Pennsylvania	Harrisburg, January 27, 28, 29	J. A. Ross, Sec'y
Ontario, Canada	London, January 27, 28, 29	Byrell Harris, Sec'y
Kentucky	Louisville, January 31-February 1, 2	J. Van Fletcher, Sec'y
Bi-State	Toledo, February 3, 4, 5	W. O. Kiracofe, Pres.
Nebraska	Lincoln, February 8, 9, 10	E. M. Samson, Sec'y
Kansas Threshers	Topeka, February 11, 12	Tim Payne, Sec'y
Michigan	Lansing, February 15, 16, 17	B. A. Dickey, Sec'y
Wisconsin	Madison, February 22, 23, 24	L. A. Clarke, Sec'y
Illinois	Peoria, March 1, 2, 3	J. M. Boyer, Sec'y
Iowa	Des Moines, March 8, 9, 10	A. W. Lembke, Sec'y
South Dakota	Sioux Falls, March 15, 16, 17	W. A. Swark, Sec'y
Kansas	Salina, March 22, 23, 24	O. E. Snyder, Sec'y
Missouri	Moberly, March 29, 30, 31	Albert Smith, Sec'y
New Jersey	Trenton, April 4, 5	S. C. Coder, Sec'y
Delaware	Dover, April 6, 7	Walter Geist, Sec'y
Maryland	Frederick, April 8, 9	William H. Renn, Sec'y

Starting the New Year Right

THE North Dakota Brotherhood of Threshermen will hold its organization meeting at the Auditorium, Fargo, North Dakota, Monday and Tuesday, January 3 and 4, 1921. The convention program follows:

MONDAY, JANUARY 3. MORNING SESSION.

10:00—Register and get acquainted.

AFTERNOON SESSION.

- 1:00—Convention called to order by H. T. Monson.
Address of welcome, mayor of Fargo.
Response—August Hanson, president of the Hanson Tractor and Automobile School.
Address, E. A. Gross, secretary-treasurer, Minnesota Brotherhood of Threshermen.
Address, J. B. Parker, representative of The American Thresherman and Farm Power.
Appointment of committees—Committee on Officers, Committee on Constitution and By-Laws, Committee on Legislation, Committee on Resolutions.

EVENING SESSION.

7:00—Entire evening in charge of the branch managers.

TUESDAY, JANUARY 4. MORNING SESSION.

9:00—Address, "Organization in Nineteen of the States—What It Has Accomplished There and What It Will Accomplish Here,"—W. H. Newsom, president National Association of Brotherhoods of Threshermen, and president of Indiana Brotherhood of Threshermen.
Report of committees and all matters necessary to complete the organization of the North Dakota Brotherhood of Threshermen.
Adjournment.
All branch houses will close Tuesday forenoon and in return all threshermen will visit them during the afternoon.

Michigan is Awake

The convention dates of the Michigan Threshermen's Association are February 15, 16 and 17, 1921. The place is Lansing, Michigan, with headquarters at the Kerns Hotel.
We expect to do everything within our power to make this our banner convention. The legislature will be in session at this time and any bill, that



This Indiana Boy Fired the First American Shot on the Western Front in France. Indiana Threshermen Will Cheer Him at Their Convention.

anyone might have in mind for the betterment of the threshermen, can be discussed at this time. Our association has been watching legislation closely in this state, and we hope to have a big attendance and hearty coöperation.

B. A. DICKEY,
Secretary.

This is Worth Reading

To the thresher organizations of all the states and especially to the Indiana Brotherhood:

We wish, through the columns of The American Threshermen and Farm Power, to inform you of the success which has accompanied the

The organization work is well under way and without a doubt will be completed by the first day of January, 1921. Don't forget our convention dates, January 11, 12, 13 and 14, at Indianapolis. "Come one, come all" is the slogan.

W. S. ARNOLD,
County Organizer.

Hoosier Program in Full

Here is a general outline of the program for the Indiana Brotherhood of Threshermen Convention, January 11, 12, 13 and 14, 1921.

TUESDAY, JANUARY 11.

MORNING SESSION.

Registration of members, branch house managers and their sales forces.

AFTERNOON SESSION.

1:00—Convention called to order.

Opening address.

Reading of records of last meeting, appointment of committees and general business necessary in opening the convention.

EVENING SESSION.

7:30—Address by manufacturers' representatives and branch house managers.

Moving pictures.

WEDNESDAY, JANUARY 12.

MORNING SESSION.

8:30—Opening of meeting.

The principal addresses and business of the convention will occupy the entire day.

EVENING SESSION.

7:30—Presentation of the American flag to the Indiana Brotherhood of Threshermen by J. B. Parker. Presentation talk by B. B. Clarke.

Other appropriate entertainment.

THURSDAY, JANUARY 13.

Educational Day—Many talks on technical operations of all kinds of threshing machines, tractors, and traction engines.

EVENING SESSION.

Moving pictures.

Vaudeville show for all threshermen and their friends. This will be the biggest and best vaudeville entertainment ever attempted by any state brotherhood. It will far surpass the entertainment of last year in every way. Please understand that this night is worth while. See the pictures of performers in this issue.

FRIDAY, JANUARY 14.

Meeting of policy holders of the Insurance Association.

Completion of all other business of the convention.

Meet Alex at Indianapolis

Brother McCreery of the Indiana Brotherhood writes as follows: "Alex Arch is the man who fired the first gun for the United States in the recent war with Germany. Sergeant Alex Arch was a member of Battery C, Sixth Field Artillery, First Division, United States Army. Sergeant Arch left the United States for France on July 29, 1917, and returned to the United States on September 5, 1919. He fired the first gun, October 23, 1917, was gassed at Cantny, France, and was wounded by shrapnel at Toule, France. He is now twenty-five years old.

"To say the least, Indiana is very proud of this soldier; it fell to his lot to fire the first gun. We owe him a great deal of praise. Not only that,



Harry Lauder Has Nothing on Harry McLauren, Who Will Entertain Indiana Threshermen.

efforts of the organization force of the Indiana Brotherhood. It is our desire to keep everyone posted as to the progress of our organization.

Of the ninety-two counties of Indiana, eighty-one of them have a complete working organization, with a membership of more than thirty-two hundred; all of the counties are planning for their annual county conventions, to be held during the month of December. The writer of this article is corresponding with the county secretary of every county already organized and urging them to put forth every effort to obtain the best results and also to appoint their representatives to the state convention, so as to give a full and complete report of the conditions in their respective counties.

DIXON Graphite Lubricants

YOU have the tractor. Now keep it always young and active. Steer clear of the junk heap.

Don't be stingy with lubricants. Give it enough. And don't keep switching from one kind to another.

Buy and use Dixon's Graphite Lubricants, because of the better service you'll get. It's a good name to know and stick to.

There's a Dixon lubricant exactly fitted for your tractor. In fact, the complete Dixon line covers every lubrication requirement for automobile, truck, steam and gas tractor.

Write for interesting free booklet, "Tractioneer's Guide to Good Lubrication."

JOSEPH DIXON CRUCIBLE COMPANY
Department 22G Jersey City, N. J.



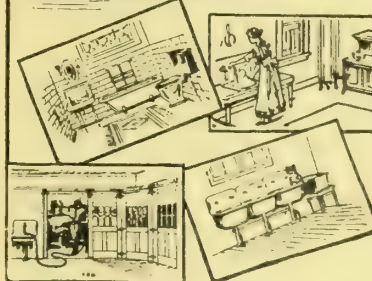
Mention The American Thresherman and Farm Power

NOW MOTHER, WE ARE THROUGH CARRYING WATER



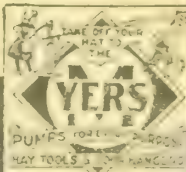
MYERS SELF-OILING ELECTRIC HOUSE PUMP SUPPLIES EVERY WANT

"Mother, we have been carrying water all our lives—think of the thousands of trips we have made to the well and the tons of water we have carried all these years, and now we are through. The pump man has finished installing our new MYERS ELECTRIC HOUSE PUMP and now goodbye water drudgery forever."



Such relief is coming to innumerable homes like yours through Myers Electric and Hydro-Pneumatic Pumps. If you are still carrying water and are sick and tired of the endless task, write us. Without the least obligation on your part, we will mail you our latest Catalog showing Myers "Honor-Bilt" Pumps for Every Purpose, and tell you how and where to obtain them.

F. E. MYERS & BRO. No. 175 ORANGE ST. ASHLAND, OHIO.
ASHLAND PUMP & HAY TOOL WORKS



A Merry Christmas and a Happy New Year to You



THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor Back teeth, made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.



The famous Mule-Kick Separation bats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing. Five sizes. Get our free catalog.

Port Huron Co., of Ill.
Peoria, Ill.

Port Huron Mach'y Co., Ltd.
Des Moines, Iowa

Port Huron Engine & Thresher Co.
Wichita, Kans.

Port Huron Mach'y Co., Ltd.
Minneapolis, Minn.

Port Huron Mach'y Co., Ltd.
Lincoln, Nebraska

Port Huron Engine & Thresher Co.
Logansport, Ind.

HULLING CLOVER WITH A PORT HURON RUSHER—Watseka, Illinois

GREETINGS

The spirit of the season prompts us to express again the pleasure we derive from our business relations with you and on behalf of our entire organization we wish for you and yours a Merry Christmas and a Happy and Prosperous New Year.

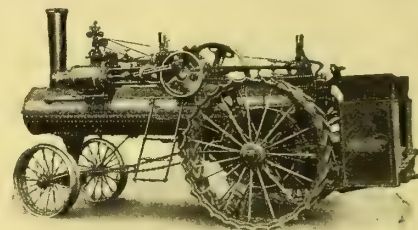
Port Huron Engine & Thresher Co.

(Incorporated)

Port Huron, Michigan

BRANCHES:

PORT HURON Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the mar-



ket today. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them. Two sizes. Catalog free.

but Indiana should be more than proud in the fact that she furnished the first American soldier to fire the first shot in defense of our flag.

"Indiana stands close to the front both in war and in peace; she furnished some fine soldiers in the Spanish-American War and her '61-

'65 record can never be wiped out or forgotten.

"The Indiana Thresher Brotherhood, being one of the strongest organizations of its kind in the United States, and being backed by the good wishes and help of the manufacturers, intends at the vaudeville show that will be given at the convention, January 13, 1921, to put on a pageant that will show true appreciation of our boy veterans."

Before this issue reaches our readers, the National Farmers' Exposition, Toledo, Ohio, will have become history. A pleasing feature of this big Ohio exhibition is the Thresherman's Day, December 8, 1920. Our old friend, W. O. Kiracofe, of Toledo, has mailed programs of Thresherman's Day. Many of our readers will enjoy reading the names of leaders in organization work.

THRESHERMAN'S DAY PROGRAM WEDNESDAY, DECEMBER 8.

MORNING SESSION.

- 11:00—Address of Welcome, Hon. Cornell Schreiber, mayor of Toledo.
- 11:30—Address, George Durban, Secretary Ohio Brotherhood of Threshermen.
- 12:00—Address, Bert Dickey, secretary Michigan Brotherhood of Threshermen.
- 12:30—Adjournment for lunch.

AFTERNOON SESSION.

- 2:00—Address, W. H. Newsom, president International Brotherhood of Threshermen.
- 3:00—Address, L. A. Hardin, vice president Russell Wind Stacker Company.
- 4:00—*Something Special.* (You don't want to miss this one.)
- 5:00—Serving of refreshments.

National Association Meeting

The third annual convention of The National Association of Brotherhoods of Threshermen was called to order November 17, 7:30 P. M. with twenty-three delegates representing ten states and the province of Ontario, Canada, out of the nineteen states and provinces holding membership in the National Association.

It was shown by the secretary's report that, during the past year, through the influence of the National organization, three new states had been organized and one re-organized.

The treasurer's report showed the finances in excellent condition, with a balance on hand and sufficient assets, bills collectable, to take care of all expenses incurred to date by the various departments of the association.

From the reports given by representatives of the various states present, it was gleaned that the National Association not only has and still is making its influence felt throughout America, but bids fair to become a powerful asset to the threshing industry of the world.

B. B. Clarke, better known as "Uncle Silas," gave an interesting, instructive and retrospective talk on the progress of organization of threshermen, which showed beyond a doubt that the pioneers in organization did not "sail to Heaven on flowery beds of ease," but had in-

(Continued on page 48.)



Lillian Will Sing and Dance for the Indiana Brotherhood.



Six Vital Facts— For Manufacturers of Farm Machinery Presented by The Rockwood Mfg. Co.

1. In a healthy way business is settling down to a more stable basis. You are entering a buyer's market with keener competition among those who sell and *more care and discrimination* on the part of farmers who buy.

2. You are thinking hard about *sales*. Rockwood, *The Drive Pulley*, is a vital sales asset. Make use then of its known and outstanding merit in *your* selling plans.

3. To transmit belt power for farm machines there is only one dependable and efficient means—Rockwood, *The Drive Pulley*. Farmers *know* this. That is what Rockwood, *The Drive Pulley*, means to them when they see it on your machine or find it listed in your specifications.

4. Say to Mr. Farmer: "Yes, my competitor builds a good machine—we both do—but look here, my machine is equipped with Rockwood, *The Drive Pulley*. It insures more power, steadier speeds, and saves you the bother and expense of pulley repairs. It costs me more, but you get the benefit."

5. Certainly your machine so equipped will sell quicker than the one that is not. And because Rockwood, *The Drive Pulley*, can be such a definite sales help to you if you use it, it must follow that it will be equally a serious handicap to you if you do not.

6. You are going to find it increasingly hard to offer a less dependable drive pulley to these more discriminating buyers. Put on Rockwood, *The Drive Pulley*, and let it work for you—instead of *against* you. Write to us for complete facts, data and prices.

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Avenue
INDIANAPOLIS, U. S. A.

—And
To You,
Mr. Farmer

YOU, Mr. Farmer, can buy more carefully today than heretofore—you must give deeper consideration to what you *get in return for your money*. You must think of how labor may be lessened—work speeded up—and costs reduced—through *power on the farm*.

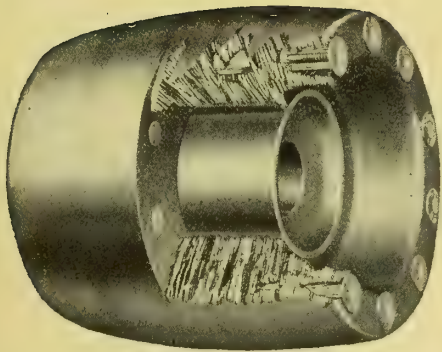
Into this great service comes Rockwood, *The Drive Pulley*—assuring as nothing else can, dependable and economical *transmission of belt power*.

You *know* the merit of Rockwood, *The Drive Pulley*—and it is natural for you to choose a farm machine equipped with Rockwood, *The Drive Pulley*, in preference to one that has an ordinary 'covered' pulley.

It is good business for the manufacturer to equip his machines with Rockwood, *The Drive Pulley*—good for him because it is good for you.

If the machine you buy is equipped with Rockwood, *The Drive Pulley*, you can be absolutely sure of maximum efficiency in transmitting your belt power. It is the *only way* to be sure.

Write for your copy of our free illustrated booklet "Belt Power on the Farm."



ROCKWOOD The DRIVE PULLEY

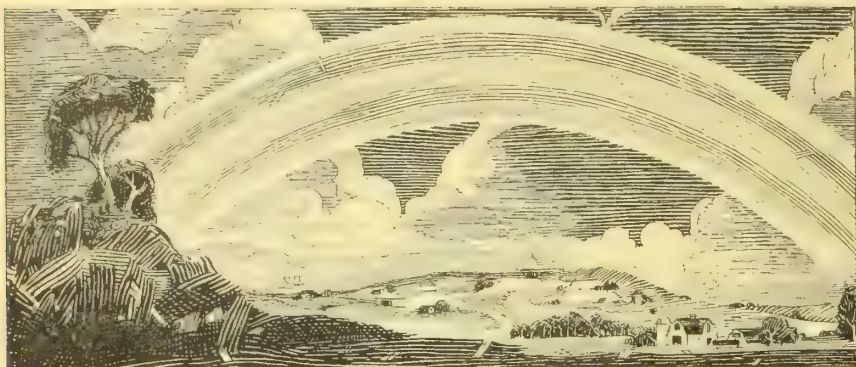
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ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and *wears and WEARS*.

Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

All the Power—All the Time

ROCKWOOD, PULLEY SERVICE



Crude oil is like a rainbow—The elements of crude oil are so completely blended that it is as difficult to separate them as to separate the blended colors of the rainbow. To get complete separation, through repeated distillations, we make countless tests. Only in this way can the absolute purity of oil products be insured.

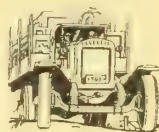
The Oil of a Million Tests

and what it means to your auto, truck or tractor

The secret of scientific oil refining is painstaking care and unceasing vigilance. In making EN-AR-CO oils we average over a million tests a year. It is only by this multiplying of tests that perfect products can be made. This thoroughness in our scientific refining processes is the protection we offer to users of our products.



The delicate engine of your auto runs at terrific speeds and develops heat which in the cylinders often exceeds 3,000 degrees at the time of the explosion. The safeguard of that engine is the lubricant which coats its moving parts to prevent friction. Your motor oil must therefore be pure. It must be tested to stand frightful heats. It must not freeze in winter. Only oil as thoroughly refined as EN-AR-CO motor oil can guarantee to protect your engine and insure its life.



Your truck has heavy loads to haul over rough roads, often deep in sand, mud, slush, snow and ice. It has to stand crushing, jolts and jars from its burden. Unless well lubricated its life will be short. Unless the lubricant is the best it will not protect the engine, transmission, gears and running parts from friction and wear. EN-AR-CO oils and greases will do it because they are the best that the most scientific refining processes can produce.



Your tractor has to be able to deliver tremendous pulling power to drag heavy agricultural implements through the heavy soil. Without lubrication it would not last a season. Improperly lubricated its life would be short. With EN-AR-CO oils and grease, and National Light Oil or White Rose Gasoline as a fuel, your tractor will deliver a maximum of service at a minimum of cost and it will serve you faithfully for many years.

WHITE ROSE GASOLINE
Clean—Uniform—Powerful

EN-AR-CO MOTOR OIL
The Oil of a Million Tests

NATIONAL LIGHT OIL
For Tractors, Lamps, Stoves

EN-AR-CO GEAR GREASE
For Differentials, Gears, Transmissions



The National Refining Co.
2208 Rose Building
Cleveland - Ohio

Five Modern Refineries
Branches in 94 Cities

The EN-AR-CO Brand

and what it means to you

The brand EN-AR-CO on a product derived from crude oil is an assurance to you that the product has been scientifically refined to the utmost degree of purity.

This applies to all EN-AR-CO products, whether it is EN-AR-CO motor oils, EN-AR-CO gear grease, National Light Oil (kerosene), White Rose Gasoline, or any of the other products we refine and market.

The motor oils and greases you use in your auto, your truck, your tractor, your motor boat or your airplane must be scientifically refined to stand the heat, the friction and the exposure to heat and cold necessary to protect the delicate machinery they are to lubricate. A better lubricant means longer life to your motor and freedom from motor troubles.

Constantly we are told by users of EN-AR-CO oils and grease that since they began using them they have been remarkably free of motor worries.

Don't ruin your motor and spoil your pleasure by using inferior lubricants. Their first cost may be less but they are more expensive in the long run in repair bills and troubles.

EN-AR-CO products are an insurance of motor comfort and satisfaction to you.

EN-AR-CO AUTO GAME FREE

Here is a fascinating game in which autos compete in a cross country race. Two, three or four can play. Only one game to a family.

Get this game for the children
Grown folks, too, will like it. Sent free only to auto, truck or tractor owners, to acquaint you with the merits of EN-AR-CO MOTOR OIL. USE the COUPON attached.

USE THIS COUPON

THE NATIONAL REFINING CO.
2208 Rose Building,
Cleveland, Ohio.

Enclosed please find 2-cent stamp to partially cover postage and packing. Please send me EN-AR-CO auto game free. I have never received an EN-AR-CO game.

Name.....
Street or R. F. D.

Post Office.....
County..... State.....

I own..... (Make of auto, truck or tractor)

and am at present using.....
motor oil. I will be in the market for more oil again about..... (give date).

Please quote me prices on.....
gallons EN-AR-CO motor oil.

Correspondence

Some time ago I wrote and asked information in regard to the price of threshing sweet clover. I received your letter of October 8, giving me this information, which was very satisfactory, and for which I thank you very much.

Now the farmer for whom I threshed the clover refuses to pay me a dollar a bushel, which, you realize, according to your letter, is a very reasonable charge. It looks very much as though I were going to have real trouble with him. In case I should, I feel that I would like to have more proof for my case. I thought perhaps you could give me the addresses of several threshermen who have threshed an amount of sweet clover. I would appreciate it immensely if you could do this for me and at your very earliest convenience.

F. L. NAESSIG.

Webster, S. D.

(Editor's Note.—Any reader who has threshed clover during the past season will do both Mr. Naessig and ourselves a real service by writing direct to Mr. Naessig or to The American Thresherman and Farm Power.)

Possibly you have concluded from the news items from this section, that the South 's in "bum shape" on account of the cotton situation, but this is not so. The South is in good shape this year as compared to former years when cotton was worth seven and eight cents a pound and seed was used to fill up holes in roads. A few of our farmers are wailing and predicting dire calamities, because cotton is only worth around twenty-five cents a pound. They are not hurt. Here is the key to their so-called distress:

Along in the early spring when cotton was quoted at forty-three to forty-five cents, Hiram called the family into conference; after a lot of discussion by family members, they decided that this fall, after ginning time, they would discard the Tin Lizzie and get a real car, such as a dual six; with this in mind, each member put forth an extra effort to produce every possible ounce of the fleecy staple, with the result that the valleys and hillsides are bulging with this Golden harvest.

Hiram reaches town this fall and learns that prices are a little off, due to inability of our European brethren to buy cotton. A great calamity has struck Hiram and his family. Instead of a dual six, they will have to be content with a super two, or a twin three. Now, isn't that sad? What Hiram should do to meet this changed situation is keep the Tin Lizzie a little while longer and buy a

good motor truck, with which he can make speedy deliveries to the city, then he can get high prices for some of the large surplus of potatoes, peas, poultry, and cotton, of which he has an abundance.

This is 'possum and 'tater time here. I don't know whether or not you are familiar with this language; if not, inquire of the Hon. Clark Howell, Editor, Atlanta Constitution.

The opossum is a very sly old animal and great strategy is required to effect his capture, but when once apprehended and prepared by one of our old negro mammies, with the proper seasoning and surrounded by yaller yam potatoes, it is a dish that will linger long, even in the mind of a dyspeptic. Should you ever visit this section at this period of the year, it will give me great pleasure to arrange a 'possum hunt and 'possum supper in your honor, and I give you my word it is nothing akin to a snipe hunt.

Drifting back to transportation, I will say that the farmers are taking to motor trucks very fast; a good many are buying used trucks on account of the road conditions. This has furnished a solution for the used truck problems in the cities, as a farmer with an occasional load can get lots of service from a used truck that will not stand the high pressure of city business.

Organization of rural express lines is slow, due to road conditions. However every southern state now has a highway program that will mean a great boom for trucks.

Atlanta, Ga. W. O. SPINKS.
Rep., O. Armleder Co.

I am almost eighty years old and have been in the threshing business for fifty-three years, so if my handwriting seems poor, you will understand the reason for it.

I noticed in the September issue of The American Thresherman and Farm Power that S. B. asks why he cannot hold steam on his 16-horse power boiler. He does not say anything about the past history of his engine, whether he bought it new or secondhand, whether he knew it had been more or less at fault all its life. He said it steamed easily while standing still, so there could be nothing seriously wrong with the generating of steam, but rather with the using of the steam by the engine.

During my experience I have had three different things come up along this very line. The first trouble happened when I was threshing about two miles from town, with an 8-horse power plain engine. Up to

Aultman-Taylor

Ten Years From Now—

you'll find hundreds of the Aultman-Taylor 15-30's that are being sold today, still out in the field—on the job—delivering the goods.

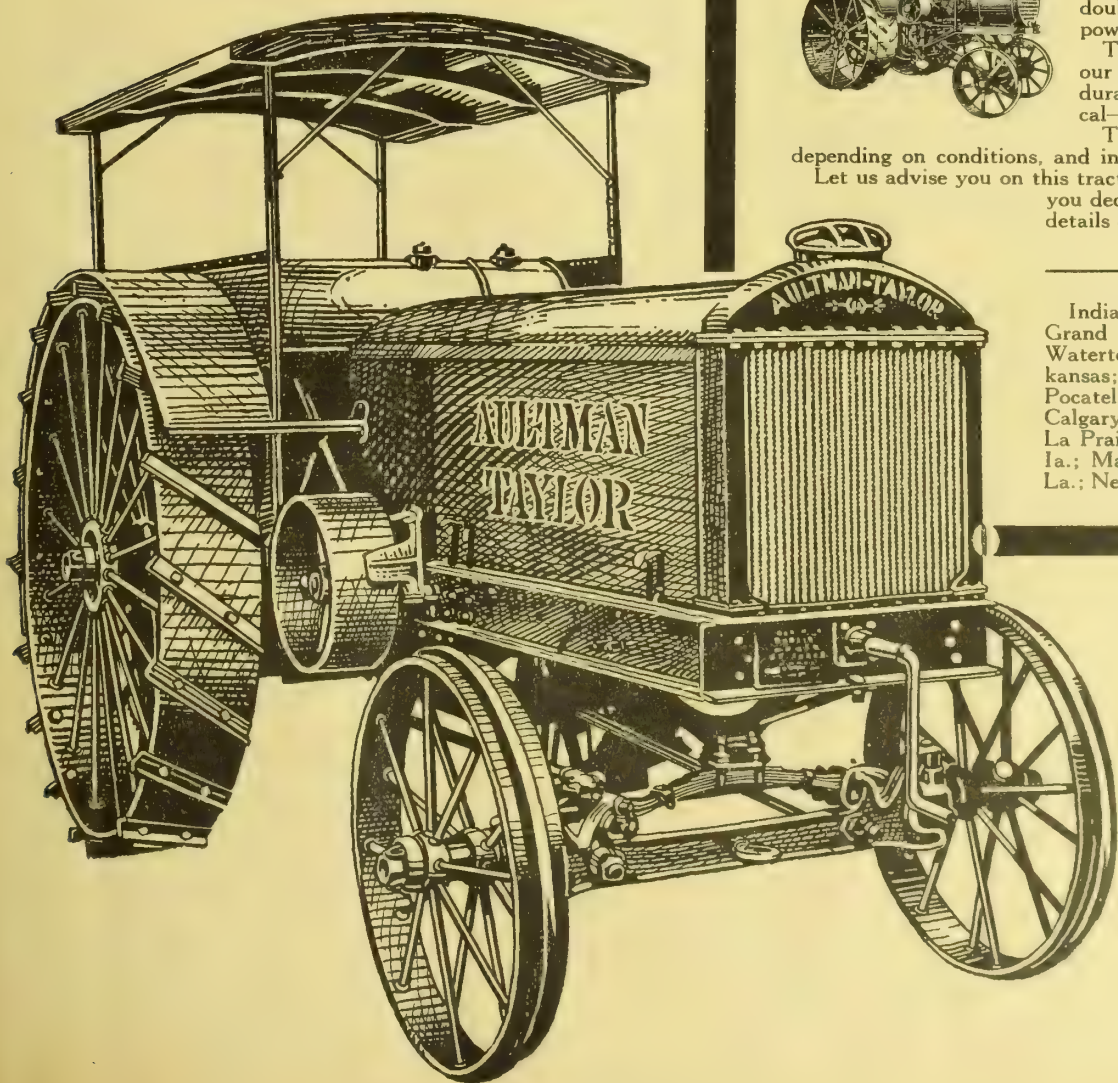
Just as, today, you find hundreds of Aultman-Taylor 30-60 machines, built ten years ago, steadily "carrying on"—giving the same reliable, unfailing service they gave the day they were put in the field.

For ten years the Aultman-Taylor 30-60 has stood supreme in the larger tractor field. And you'll find in the Aultman-Taylor 15-30 the same honest materials and workmanship—the same built-in service that has made its larger brother the acknowledged leader in its field.

The 15-30 is the most economical all-round farm-size tractor on the market today. That's because it is built big enough to put through the largest power job on your farm—yet with power flexible enough to handle the smallest jobs at lowest operating cost.

It is as sturdy as a steam engine—its design just as simple as good engineering permits. Every part is easy of access—and it has real "stuff" under the hood. The 15-30 is a piece of "thoroughbred" construction throughout.

If you are thinking "tractor" we advise that you see the Aultman-Taylor dealer in your locality today. He will give you all the facts. Or write us direct.



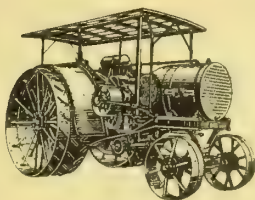
—and this Famous Line of Larger Tractors



Aultman-Taylor builds the only really successful line of larger tractors made today. They are the undisputed leaders in the larger tractor field. And this leadership has been won by the sheer quality of their product. That quality embodies good materials, sensible design, careful workmanship and close attention to every detail that enters into the building of a powerful and efficient tractor.

For ten years these larger Aultman-Taylor tractors have hammered down farming and road building costs to the last cent. Several thousand of these tractors are at work in various parts of the country. Many of them, sold ten years ago, are still hard at work, giving just as efficient service as when they were new.

The Aultman-Taylor 30-60

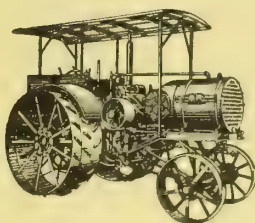


Frankly, not a tractor for the average size farm—but a huge, rugged machine built with the brute strength for the biggest power jobs. The 30-60 is particularly adapted to use on larger farms and for road building. Actual performance has shown this 30-60 will build more miles of road in a given time, build them better, at much less cost than any other power—and at a saving of fully 50% over horse labor.

The larger farms are using the 30-60 with unequalled success to wade through farm power work—heavy plowing, discing, drilling jobs and the like—that horses simply cannot pull through.

It is a proven tractor with 10 years of faithful service behind it. It draws 8 to 12 plows and operates the largest thresher.

The Aultman-Taylor 22-45



A heavy-duty tractor built along the same lines as the 30-60. No pains have been spared to make this 22-45 size just as efficient in every way as the larger size. We have been building the 22-45 size for about three years and it has proven beyond all doubt it is a real honest-service machine with the power to put through any job on your farm.

The motor of both the 22-45 and 30-60 is built in our own shops, under our own supervision. It is durable, accessible, simple in construction, economical—and powerful.

The Aultman-Taylor 22-45 draws 6 to 8 plows, depending on conditions, and in the belt operates a 32-inch thresher.

Let us advise you on this tractor question. Let our 55 years' experience help you decide and decide right. Write in today for full details on this famous line of tractors.

BRANCH HOUSES:

Indianapolis, Ind.; Decatur, Ill.; Minneapolis, Minn.; Grand Forks, N. D.; Fargo, N. D.; Minot, N. D.; Watertown, S. D.; Kansas City, Mo.; Stuttgart, Arkansas; Denver, Colo.; Wichita, Kas.; Lincoln, Neb.; Pocatello, Idaho; Portland, Oregon; Great Falls, Mont.; Calgary, Alberta, Can.; Regina, Sask., Can.; Portage La Prairie, Man., Can.; Lansing, Mich.; Des Moines, Ia.; Mason City, Ia.; Chilhowie, Va.; New Orleans, La.; New York City.

The
Aultman & Taylor
Machinery Company
Mansfield, Ohio



Runs Easier—Cuts Faster

Two mighty good qualifications in a saw—and two of the reasons why there are so many Atkins in use on the farm today.

For the farmer is a keen judge of saws. He knows there's a difference. The saw that goes through in the quickest time and with the least effort makes a hit with him. And so Atkins is his choice.

The Atkins slogan, "A Perfect Saw for Every Purpose," finely illustrates the scope of Atkins service. Ask your dealer for Atkins Saws.

The insert shows two saws—to the left an Atkins Segment Ground; to the right an imitation. It's not difficult to see why the Atkins principle is right and why it runs easier and cuts faster.

Ask for our free book, "The Saw on the Farm"—tells all about Atkins Saws and Saw Tools.

E. C. ATKINS & COMPANY, Inc.

Established 1857—"The Silver Steel Saw People"

Home Office and Factory:
Indianapolis, Ind.

Canadian Factory:
Hamilton, Ont.

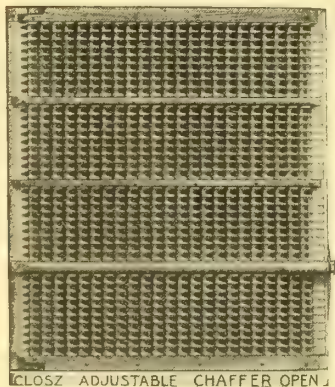
Machine Knife Factory:
Lancaster, N. Y.

Branches carrying complete stocks in all large distributing centers as follows:

Atlanta	Minneapolis	Portland, Ore.	Vancouver, B. C.
Chicago	New Orleans	San Francisco	Sydney, N. S. W.
Seattle	Memphis	New York City	Paris, France



The Chas. Closz Patent Adjustable Sieves and Adjustable Chaffers



have made the saving and cleaning of all kinds of grain and seeds a source of satisfaction and pleasure to every practical thresherman.

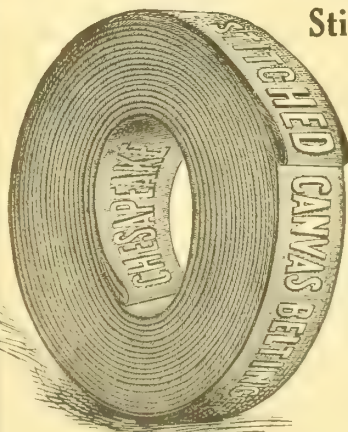
Practical experience has proven that the Closz Adjustable Chaffers are indispensable for doing the best class of work.

Write for catalog with price list. Mention size and make of your machine.

Charles Closz Co., Inc.
Webster City, Iowa

The CHESAPEAKE

Stitched Canvas Thresher Belting



"Thirty years of service that has not been surpassed by any other canvas belt."

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this time I had always had good luck with this small engine. We were burning wood (as this was long before coal was used for threshing), when my fireman failed to keep steam. We thought the wood was poor for steam, so bought better wood. Still this did not help matters any. The eccentric yoke had some lost action, so I took it to a farmer's grindstone, ground on it for an hour or more so it would fit closer to the eccentric. This did no good, however. Finally I hitched the team to it and took it to an expert. After examining it, he discovered that the eccentric had slipped. The adjustment was made in about fifteen minutes, after which the engine worked perfectly.

At another time I had a 12-horse power traction engine which had been working nicely. Since it had run for many years, I thought it would be an advantage to have the cylinder rebored, the valve seat dressed, and new rings put on the piston. This was done by a mechanic in our own town. The result was that I had trouble the next season keeping steam. I burned at least one-third more coal than ever before, and often had to stop for steam. My son was the fireman, and was considered one of the best. He is now one of the best auto men in the state.

I noticed that the engine exhausted much harder than before. After the threshing was nearly over, I concluded there must be something wrong with the valve. On examination, I found it almost three-sixteenths of an inch too short. I then riveted a strip of steel on the edge of the valve, one-eighth inch in thickness, set the valve, and this remedied the trouble.

Another trouble with hard steaming was found in a secondhand 14-horse power engine which I bought. The taps at each side of the valve were just tight enough to keep the valve from setting snugly on the seat. The exhaust had a slight blow at the end, which indicated where the trouble was. It was not only harder to keep steam, but did not give the power that it should give. The trouble was remedied by loosening the taps a little. These remedies may help S. B. in his troubles.

W. S. CRAMER.

Martinsville, Ind.

(Editor's Note: Mr. Cramer writes a "good hand" and uses good English grammar. Let us hope we shall be able to do as well at eighty years of age!)

The photo herewith shows M. S. Davis, of Clarksville, Iowa, one of Iowa's veteran thresherman who has been in the business continually since 1868. He was born in 1852, and, when a small boy, moved to Fayette County, Iowa, near Arlington. Being one of the early settlers in Iowa, he

has seen many developments along the farming and threshing line.

Mr. Davis first bought a Climax 8-horse power engine and a Case Apron separator. He then bought a Cary engine and a Tornado separator and later had some experience with a separator made by E. S. Cummings & Co.

In 1872 he bought of the J. I. Case Threshing Machine Company a two-wheel Woodbury and a Case Apron separator. There were few railroads at that time, so he had to go to McGregor, Iowa, and haul them overland, which was quite different from today when they are being delivered at a man's door. Then he bought a four-wheel Woodbury and a separator that was known as The LaCrosse Clipper separator. He then purchased a Dingo Woodbury and



M. S. Davis, Pioneer Iowa Thresherman.

a Case agitator separator, and some time later bought a Case Ironsides separator, and a Case 10-horse power steam engine.

He has kept up with the improvements along the thresher line, feeling that his customers were entitled to the latest and most up-to-date machinery. He now owns, operates and supervises the whole rig, which consists of a 60-horse power Case engine and an Aultman & Taylor separator. Mr. Davis is not an old man yet, only sixty-eight years old—and when threshing season starts up, he is on the job early and late. He has been through many hardships, but still likes and enjoys the work.

Waterloo, Ia.

F. E. Lamb.

I have been a reader of The American Thresherman and Farm Power for a good many years, and wish to have it renewed for five more years. It takes the tired feeling out a fellow. I think, just to read the letters from the different farmer-threshermen.

I have been in the game with my father for twenty-four years and we have had good times threshing together. We operated the old-style horse outfit for several years, when I was young, and made quite a little money at four cents a bushel. We

then sold it and bought a merry-go-round, which we operated for three years.

This brought us good money. When we were not very busy during the fall of the year, we would go out into the country and watch the threshermen operate their steam engines. We soon got the fever; so we sold the merry-go-round and bought a steam rig. All the farmers expected us to thresh for the same price as we did with the horse-power, but we did not. We raised the price to five cents a bushel for wheat and four cents for oats, and had all we could do.

The farmers soon learned that it saved them two cutters, three straw stackers, and the man who used to handle the half bushel bucket that measured the grain. Of course, these are now out of date.

Our greatest trouble around here is poor bridges and side hills. We are not bothered much with price cutters.

I have been handling all kinds of engines. I used to buy secondhand ones, work them for a year, and then sell them. This gave me a chance to make money on the side.

I have had three Aultman and Taylor engines, three Minneapolis engines, one 16-horse power Avery, one 20-horse power Huber, one 16-horse power Advance, and one 15-horse power Rumely. All of them seemed to be good engines, but I sold them and bought an Aultman and Taylor 30-60 tractor. I enjoy running it the best of all. We had long straw this year. Father's machine is a 39x56 separator and the tractor runs it without any trouble. Boys, the tractor is just the thing to use,—especially when water is scarce. There is no need of a water hauler, and a good machine man with a boy's help can run the outfit very well.

In this part of the country we do not use a crew, and the last three years we got ten cents for threshing and furnished our own coal oil and gas. I mixed the coal oil and gasoline equally, to run the tractor, and it worked all right. The mixture cost us about eighteen cents a gallon and the engine averaged forty gallons per day at twelve hours a day. The tractor is the cheapest to run by far, as the coal is worth thirteen dollars a ton and one saves the price of a man and team, besides the expense of keeping up a pump and hose.

B. W. HOPPE.

Long Island, Kans.

Two locomotive engineers met on the street. Bill sang out to Jim: "We voted to strike at the meeting to-day, but I didn't see you there."

"No," replied Jim, "I couldn't get downtown on account of the streetcar men's strike. Those fellows haven't any consideration at all for the public."

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Parson Dickson's Sermon

DE twelbth an' thu'teenth vuhses ob de twenty-fust chaptah ob St. Matthew reads dis way: "An' Jesus went into de temple ob God an' east out all dem dat sold an' bought in de temple, an' overthrew de tables ob de money changahs an' de seats ob dem dat sold doves, an' said unto dem, It is written, mah house shall be called a house ob prayah but ye hab made it a den ob thiebes."

If I should come to dis little house ob prayah some fine Sunday mawnin' an' see de men folks shootin' craps an' playin' cahds, an' de women folks sellin' vegetables an' chickens an' doves, yo' all don't need no guide to health to teach yo' dat dah would be a mighty scattahment 'round dis place. Dis am precisely what Jesus found in de temple in Jerusalem in de yeah ob ouh Lawd thu'ty-three.

I has neber been in de holy land nor 'sperienced de many things dat beset de trabelah dah, but I has had it from de lips ob dem dat has made de pilgrimage ober dah, in time ob peace, an' from dese repohts it would sutainly seem dat if de Lawd was to retuhn to de holy city He'd hab to use a scourge many times to clean out de money changahs an' dem dat sells doves.

A friend ob mine once made de touh ob de wuhld. He was an infidel an' didn't beliebe in de gospel as it am giben to man. Wid dis man, who, by de way, was one ob de best friends ob de pooh dat I eber knew an' who gabe alike to Jew an' Gentile if in distress, was a Catholic priest, as a trabelin' companion. When dey reached Jerusalem de hotel at which dey stopped was an abomination in de sight ob de Lawd, an' in de streets an' in de chu'ches dey found men an women tradin' an' bartahrin' jest as dey did when de Marster drobe dem out ob de synagogue two thousand yeahs ago. Dey found cattle lowin' an' sheep bleatin' an' chickens crowin' right at de doahs ob de chu'ch, an' a babel ob voices mixed wid many tongues proclaimin' de bahgains dey had to offah. Why did they go dah? 'Kase de people gwine to de chu'ch could find traffie right in dah pathway, an' dey bought an' sold in de holy place as in de days ob old. Moahober, it am a histor'cal fact dat it am dangahrous to trabelers 'less dey am gahded by Tuhkish dragomen (soljahs) to keep de rabble way. One friend tole me dat as dey were slowly ridin' 'long in de caraban ob mules dat great big, coarse ugly brutes ob men would call out "Bucksheesh" an' if dey failed to heed de demand an' cast a handful ob money into de street foh de mob to fight an' scratch ober, dese men would stone de caraban to exact tribute. No place in all de wuhld has done been 'lowed to become moah depraved in many ways dan Jerusalem, de holy city ob which we sing, an' which am de hope ob de orthodox Jew. De streets am filthy; dah am no system ob doin' things, an' ebervbody seems to be crooked an' duhty both.

De infamous Tuhk has become de most unscrupulous ob any nation ob people in dah dealin' wid mankind. Not content wid polutin' eberv-

thin' dat dey comes in contact wid, dey resoht to de most unscrupulous deeds in de wuhld. Dey has tried foh yeahs to kill off de whole Ahmenian race but now dat country am to become a nation ob its own. Dey hab exacted tribute from all who desiahed to visit de tomb ob de Lawd, whah two branches ob one religious faith fight an' scratch ober de right to obsuhve dah diff'rent rites on various days, an' in all dese rows de ones who pay tribute to de Tuhks always come off de victahs. What an eberlastin' shame dat chu'ches claimin' to represent de Christian religion kain't get 'long widout fightin' ober dis sacred place. It was 'kase ob de pilgrimage ob mankind an' de toll an' tribute from de trabelers dat de Tuhks valued de holy land so highly. Dey could collect money from all who come thithah. But now, thank de Lawd, Great Britain has done driben de Tuhks from de City ob David an' set up a clean an' honest goberment in Jerusalem.

But de city ob de Jews am not de only religious place dat needs 'tention. In ouh own America, whah dah am a chu'ch on most eberv cross road, dey suahly needs a renovatin'. We am buildin' chu'ches an' solicitin' money to pay foh dem an' not one chu'ch in ten am half filled wid wuhship-pahs. What dis wuhld needs am a religious awakenin' dat will clean out de money changahs an' dat will change men's hahd, flinty souls into real Christians whah, 'stead ob usin' de cloak ob religion to furthah de intahrest ob selfishness we can stand fo'th as real Christian men an' women, doin' God's wuhk an' helpin' to bring about a bettah condition 'mong men. De time am ripe foh a revival ebervwah, not only in Judea an' in Jerusalem, but in dese United States most ob all, whah men hab gone money mad an' whah women am pawnin' dah souls foh dress an' finahry; whah wuhkin' guhls parade de streets ob de cities weahrin' millionaire clothin' an' whah honah an' righteousness hab been doped by de demon ob greed.

What we needs am preachahs an' priests to preach de wuhd ob God an' plead wid de people to tuhn from dah idolatry an' acknowledge de one true God, de God ob Abraham, de God ob Isaac, an' de God ob Jacob, who done sent Christ Jesus to teach de truf to both Jew an' Gentile alike.

I sometimes wondah what has become ob de ole fashioned religion dat made men's souls tingle an' swell up undah de realization ob real religion, dat made de women shout "Glohry to God in de Highest," an' to stand up an' testify to de trufs dat de Lawd had man'fested unto dem. What would de Methodists say today if dah women folks would begin to shout in meetin'? Dey would feel so shocked at de spectacle dat dey would feel outraged. Yet in de days when men stood up an' test'fied an' when women shouted dah praises to de Most High in de ole fashioned Methodist way, day was moah Simon pure religion in a chu'ch in one night dan in a week in dese days when de preachah does it all, 'ceptin' what de choir does in singin' in a machine-made way.

I'd rathah sit down an' witness one suhmon in a real revival meetin' an' de aftahmath whah men tuhned from dah sinful ways an' whah women led in de shoutin' dan to lib a whole month in an atmosphere ob cold stohage religion.

Let me tell yo', mah chillern, dat de wuhld am on de vuhge ob a terrible social upheaval an' unrest, moah dan eber befoah in its hist'ry, an' unless we tuhn from ouh idols an' seek de true God an' preach an' teach de Fathahhood ob God an' de Brothahhood ob Man, an' practice it, not only 'mong ouh own chu'ch folks but 'mong de Jew an' de Gentile races, 'mong Protestant an' Catholic alike, woe unto dis wuhld, foh de consequences no man can eben 'proximate.

Men caih nothin' foh dah wuhd any moah. Take de man dat hiahs oder men an' he begins to practice deception an' grand rascality an' seek how he can beat dem in de game ob life, an' dah-in he creates enemies out ob friends dat he should be able to trust to de last breath ob life. An' what 'bout de man who sells his time? He tries to boost de wages way beyond what any man makin' an honest profit can begin to pay, an' den he wants to wuhk jest as few houhs as poss'ble. He begins in de mawnin' when he should hab half a day's wuhk already done, an' he quits wuhk when de sun am houhs high. Did de Givah ob All Good intend dat we should erect an aristocracy ob idleness an' laziness 'mong all men who toil foh a libin? He did not. De Lawd neber meant foh men to considah a beah eight houhs any day's wuhk an' de man who sticks to dat schedule am encouragin' idleness an' laziness an' rascality an' crooked dealin's in his own ranks an' 'mong all de oder callin's in life.

How long would yo' 'speat de wuhld to receibe its daily bread if de fahmahs wuhked but eight houhs a day? Am yo' any bettah dan de man who libes on de fahm jest kase yo' lib in some back alley or eben upon de grandest boulevard in de city? Yo' am not, an' de lazy, good-foh-nothin' rascal dat pretends to be bettah kase he doesn't lib on de fahm am preachin' an' practicin' de bery doctrine dat am dribin' dis nation on de rocks.

It am 'bout time dat somebody representin' de Lawd God ob Righteousness went into de business temples an' 'mong dese so-called unions an' upset de tables ob de money changahs an' ob dem dat sell doves, ob dem dat am sellin' honah an' all dat am good an' tuhnin' Judas Iscariot an' sellin' dah Lawd an' Marster foh thu'ty pieces ob silvah.

Let us pray dat dis spirit ob unrest an' unrighteousness may cease an' den let us go home an' begin examinin' ouhselves an' see what we am doin' to help bring it about, an' den cast out de money changahs ob ouh own selfish souls.

Let de choir lead in singin',

"Mah faith looks up to Thee,

Thou Lamb ob Calvahry,

Savior Divine,"

an' lookin' foh de blessin' we will be dismissed.

The Sixth Annual NATIONAL TRACTOR SHOW And Educational Exposition

Every man whose business is farming, as well as every man whose business depends upon the success and progress of farming, should come to this show!

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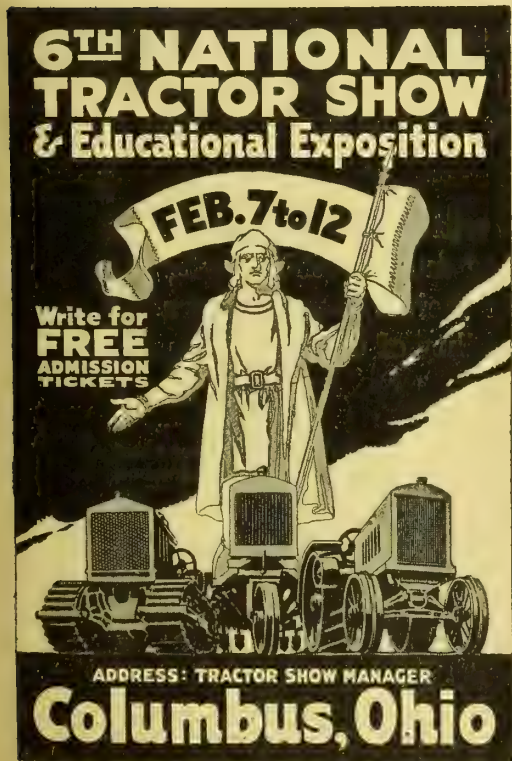
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Decide now to come. Write to National Tractor Show Committee, Columbus, Ohio, for our program booklet and free tickets for yourself and family. Ample accommodations at reasonable prices have been arranged. All who attend will profit.



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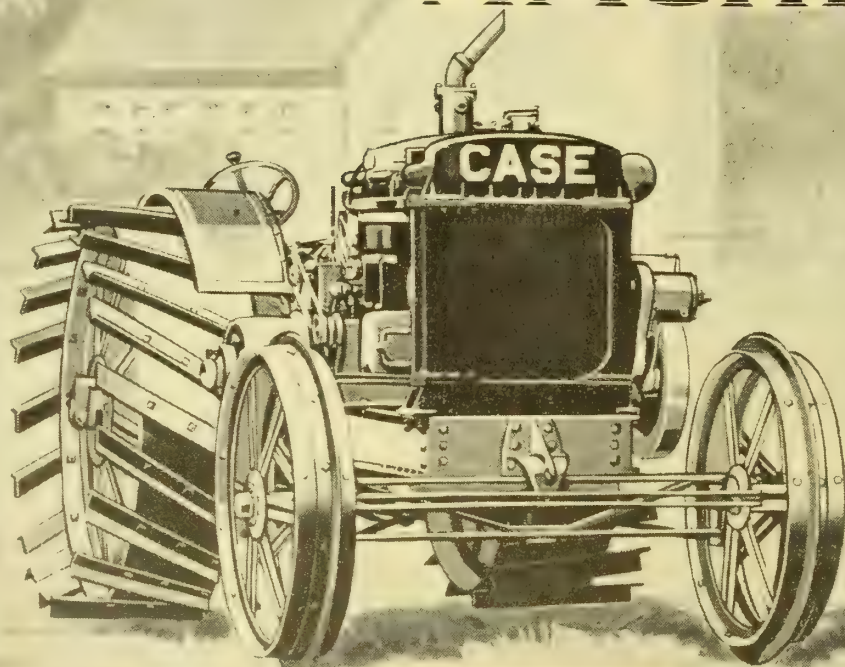
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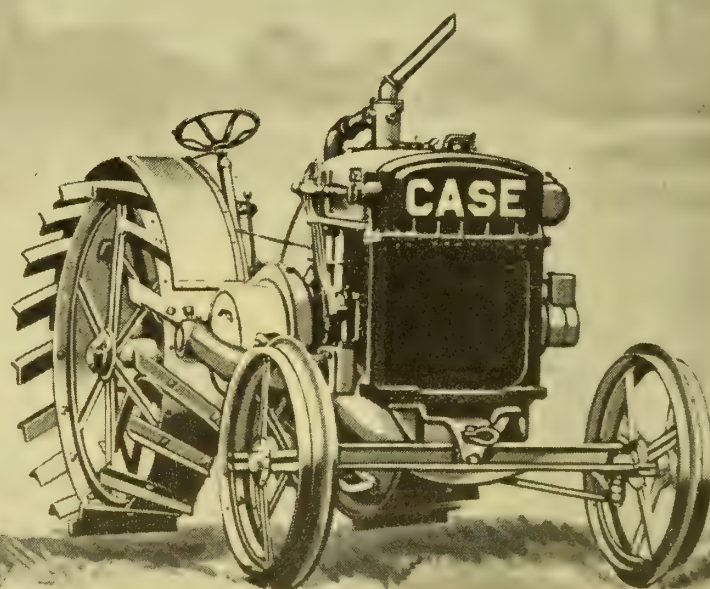
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22-40 Case Kerosene Tractor

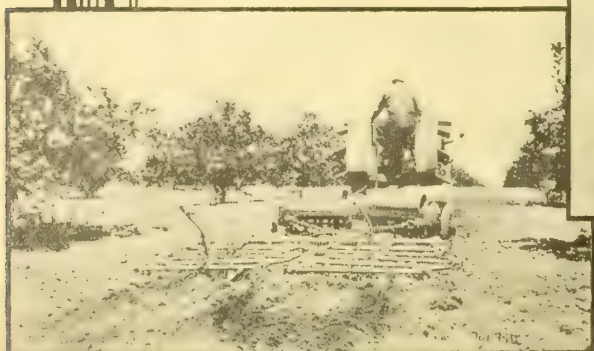
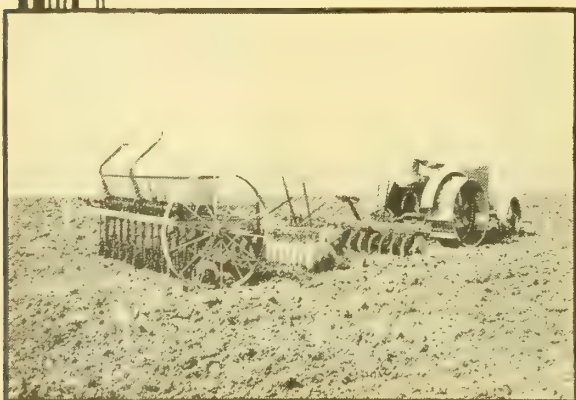


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Probably many tractors are bought with the purpose of using them principally in the work of plowing and threshing, with the result that they are not as profitable to their owners as a tractor should be. But the remarkable adaptability of the Case Kerosene



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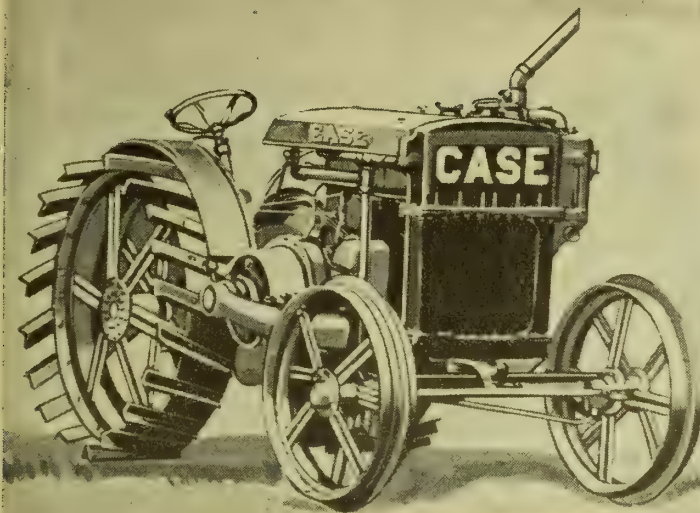


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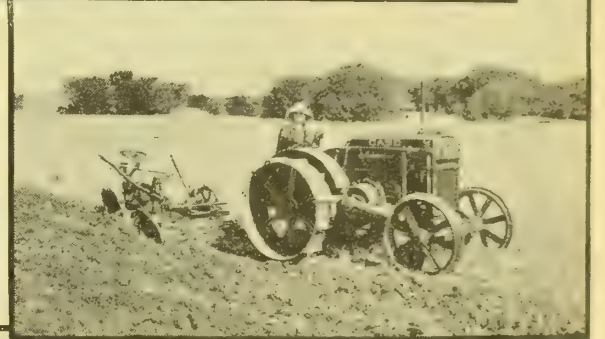
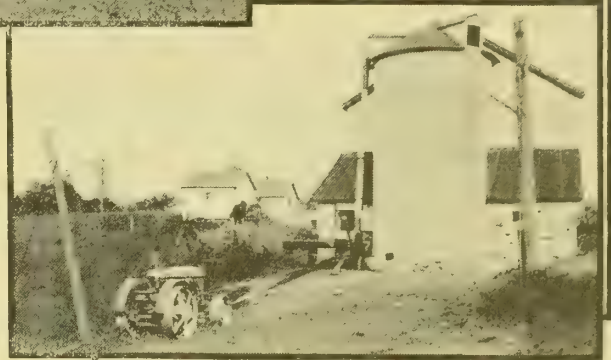
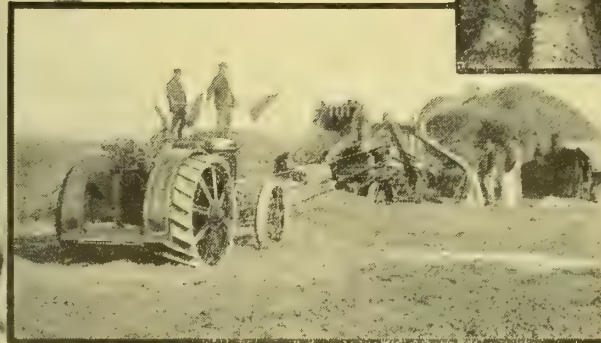
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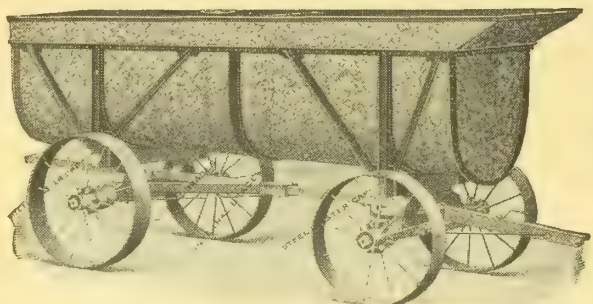
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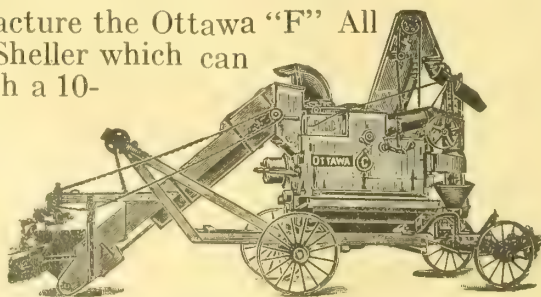
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Women's Department

A Christmas Prayer

God grant no little child may go
With hungry heart or empty hand—
Give this thy world one radiant day
To understand, to understand.

Give us the fitting word to say,
The spendthrift smile, the brave caress;
Disclose our hearts and give us now
The courage of our tenderness!

Lord, we are old with toil and tears,
Our souls are veiled with various art,
Yet still the little children keep
Thine ancient simpleness of heart—

And they alone of all thy breath
May bind the burning angel's eyes
And, striking laughter from the sword,
Retrace the years to paradise.

They are so brave with love and dreams,
So eager eyed and, ah, so dear!
I think we must return them now
The faith they bore across the year.

I think that we must give them now
The spendthrift smile, the kindly word,
That earth may keep its ancient hope
And we thy full commandments, Lord.
—Dana Burnet.

What She Learned at Christmas

She wasn't very big; she was a mite of a woman, while he was a strapping six-footer. People had smiled, during their courtship and early married years at the contrast they made and often said, "Opposites attract." In dispositions they were as unlike as in physical appearance. She was impulsive, demonstrative, frank-speaking, but altogether lovable. He was slow of speech and action, calm in appearance, a man whom you appreciated more and liked better each time you met him. He set about wooing and winning his sprightly, elusive bride as he set about everything—with a patience and constancy that were bound to succeed, no matter how long the effort required.

They were married on Christmas Day, her wish, while he said it mattered not to him, only so the ceremony that made her his for life came off as soon as possible. They had a glorious two weeks in the not-distant city, when they indulged themselves in a good room at the best hotel, theatre tickets, concerts, rides to the parks and all the things that were unusual in their country-life. Then they came home to the farm he had inherited and went to work with the zeal and joy that come with such "beginnings."

That was five years ago, this Christmas time, five years of sun and shadow, but mostly sun. And now their family circle numbered four, for first a dear little daughter had come, so like her little mother that it was positively comical. And only six months ago, a son had perhaps heard, but surely had not heeded, when his mother exclaimed, "Oh, you wonderful, wonderful boy!" and heeded as little his father's silent but long and almost worshipful admiration, as he held him to his heart.

This description of their life makes it sound very tranquil and so it surely looked to the observer. They were not wealthy, but there was no cause to fear the appearance of the "wolf" and careful management of

their farm and affairs would probably lead to competence. But in the days before Christmas she began, all unconsciously, to nourish a feeling of discontent. At first it seemed very general, then, because it must have some objective, it commenced to gather around him. She began to be irritated with his slowness and calmness of speech, she wished he would storm about occasionally, she wondered if he was growing less fond of her and secretly longed for the constant caresses of her honey-moon days. He was generous in providing for his family and she always knew as much about the family finances as did he. They talked over together any problems of moment and when he had suggested, some months before, that he should like to take out a life-insurance policy, as a source of protection to her and the children, if it were needed, she had fully acquiesced. But somehow, of late, she began to feel that the economy necessary to meet the premiums was not worth while, that he should never have entered into the arrangement, that he just wanted to accumulate dollars, at the expense of their legitimate pleasures. In fact, she felt exactly as a balky horse acts!

And then, one morning, her little, false world that she had erected, came crashing down around her head. He had started for town to do some necessary shopping, and she was going about the routine of the home, with rebellious thoughts and lagging steps. As she glanced out of the kitchen window, she saw a neighbor's auto driving very slowly and carefully up the lane. What was that in the back seat? A man, supporting another! Surely it could not be—it was her husband they were bringing home hurt!

She lived through the eternity that elapsed before she could fly down the path and meet the car. She heard them tell her not to be frightened for he really was not seriously injured. She made the bed ready and helped in the removal of his clothing. She was calm and collected now; this was no time for tears. She listened to the doctor's orders as he prepared to give an anaesthetic that he might be thorough and yet merciful in the examination of the injuries.

Finally it was finished and she heard the verdict:

"It will be a long, painful pull, but there is no doubt your husband will fully recover. Had his head hit that post two inches higher, when his auto turned over, he probably would never have known what hurt him. You are very fortunate."

Then she fainted. It was weeks before she cared to hear how it all happened. She had him; she was privileged to nurse him back to

health; that was all she wanted. And in those weeks her sense of values, which had become sadly distorted, asserted itself and she saw clearly that the lives and health and harmony of spirit of her little household were the things, after all, that really mattered. That the externals, without which she had persuaded herself they could not have a happy Christmas, were mere baubles.

Christmas Cooking

If you would like to make some "out-of-the-ordinary" cakes this Christmas time, try the following recipes, which are vouched for by a famous southern cook. They are the

quarters of an inch thick. Cut into round cakes with a cookie-cutter then open each one at the side with a sharp penknife and insert in the cavity a raisin, a teaspoonful of rich preserve, or a lump of sugar dripped in fruit juice, as preferred. Close the opening, wetting the edges so they will stick, press carefully together, let the olykoeks raise forty minutes until light. Fry in plenty of smoking hot fat, drain and roll in powdered sugar. These are delicious served with preserved peaches.

Moravian Shrewsburies—These are by far the most celebrated of all Moravian small cakes. One pound of light brown sugar, six ounces of sweet



favorite cakes of the countries named and our southern friend calls them **CAKES BAKED ONCE A YEAR.**

Dutch Olykoeks—Beat to a cream one cupful of butter and two cupfuls of sugar; add two eggs, beating vigorously, then add a saltspoonful of salt, half a cupful of hot milk and enough flour to make a stiff batter; next add one cupful and a half more of hot milk and flour to make the batter as stiff as can be beaten with ease; allow to cool until lukewarm, then add one yeastcake dissolved in one cupful of lukewarm water; add enough flour to make stiff again, then beat the batter until it blisters; cover and set in a warm place until very light. When well risen, dredge the board with flour, turn the dough on it and roll it in sheets, handling it as little as possible. The sheets should be about three-

butter, one pound and a quarter of flour, four well beaten eggs, one teaspoonful of baking soda and equal parts of powdered cloves, powdered cinnamon and grated nutmeg to taste. Beat the butter and sugar to a cream, then gradually add the flour, soda, spices and the beaten eggs. Knead lightly and roll out on a floured baking board. Cut into cakes with a small cutter and bake until ready in a moderate oven.

Scotch Currant Bun—Four pounds of bread dough, two pounds of seedless raisins, two pounds of currants, one pound of butter, a quarter of a pound of candied orange peel chopped fine, two ounces of chopped citron peel, one ounce of powdered cinnamon, one ounce of powdered ginger, half an ounce of powdered allspice, a quarter of an ounce of pow-

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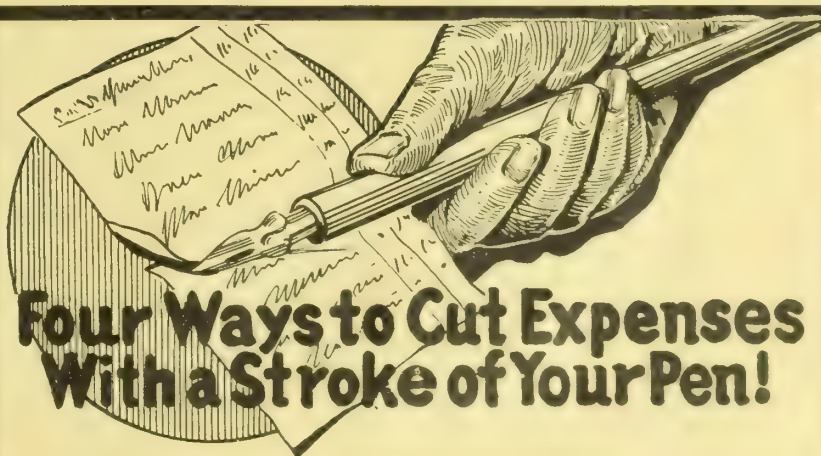
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Pickering Bulletin

MERRY CHRISTMAS TO ALL Announcement

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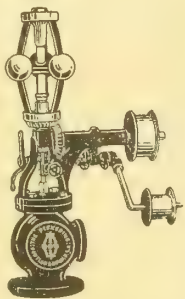
Appreciating that we have not been able to make as satisfactory deliveries this season as earlier—from the fact that we have been favored by an unprecedented demand for Pickering Governors of all kinds and from all parts of the world—we have now made arrangements for the future that will be of interest to you, especially when desiring new equipment of this kind.

We have arranged for a stock of the more popular sizes of Pickering Governors to be carried in each state of the Union, where such fittings are in demand, which is available for you, and if you would care to know the name of this nearest distributor, will be glad to hear from you any time.

This is another phase of SERVICE that we are offering our patrons in return for their loyalty and favorable regard and we are confident that it will be appreciated.

Let us suggest, however, that any renewals of Governors be considered and acted upon early for the 1921 season, thus avoiding a recurrence of the disappointments that could be avoided through anticipations of one's needs. Afterward, we will do our best.

The Pickering Governor Co.
Portland, Conn. - U. S. A.



Mention The American Thresherman and Farm Power

dered cloves and one grated nutmeg. Mix the butter and the dough well together, work it in with the hands; then take one pound of the dough, roll it out on a baking board with a little flour and cut off as much as will form a top crust for the bun. Then with the other part of the pound of dough line a buttered cake tin. Now put the remaining dough into a large basin, add the fruit, almonds, peel and spices, and work well with the hands. Then fill the tin neatly, and after wetting the top edge of the dough with a little water, place on the top crust and prick over the top with a fork. Bake in a good steady oven for four hours. After the top is browned brush it over with beaten egg. This will glaze it.

Sugar, Spice and Everything Nice

OYSTER SALAD.

Slightly scald a quart of oysters in their own liquor; skim well and drain them; sprinkle over them a little cayenne pepper, a saltspoon of salt, a tablespoon of vinegar, and one of oil if liked, and two of lemon juice. Put away in a cold place till time to mix the salad, then add a pint of finely cut celery and three table-spoons of mayonnaise. Serve on lettuce leaves and garnish with small red peppers or stuffed olives.

NUT FRUIT CAKE.

One cupful of butter is creamed with two of sugar, and four eggs added, yolks and whites beaten separately. One grated nutmeg and one pound of flour stirred in gradually, keeping out about two ounces of flour to dredge the nuts and raisins. A large coffee cupful of raisins, stoned and split, and the same amount of hickory nuts, chopped as fine as possible, are stirred in last. A cool bread oven is the best for this cake, and when finished add a thick pink icing flavored with rose water, and decorated with an edging of home-made burnt almonds.

CYMBALS.

Half a pound of sugar, quarter pound of butter, two eggs, one nutmeg, one teaspoonful of soda, half a teacupful of sour milk. Cream the butter, and add the sugar to it. Then add the eggs, beaten separately and very light; then grate in the nutmeg and pour in the soda dissolved in the milk. Then add enough flour to make a dough as soft as can be handled—one quart will probably suffice. Roll out upon a board, and cut into small cakes; sprinkle sugar over them and bake quickly.

KISSES.

Beat the whites of three eggs until they are stiff; then sift over the eggs three-quarters of a cupful of powdered sugar. Mix the sugar in lightly with a knife. Cover a board with paper, drop the mixture on it by spoonfuls, and place in a moderate oven, leaving the door open for

thirty or forty minutes, then close door for a few minutes to let color. Stick two together with a little jelly or jam between them.

PLUM PUDDING.

Chop finely half a pound of suet, stone three-quarters of a pound of raisins, wash and dry the same amount of currants, also take three-quarters of a pound of sugar and the same amount of dried breadcrumbs; add also to these ingredients a quarter of a pound of sliced citron, two or three sour apples, peeled and cored and then chopped fine, and the grated peel of one lemon. Mix these thoroughly, adding half a teaspoonful each of cloves and salt; add also six eggs and one gill of brandy. Steam for four hours in two buttered molds. Turn out on a hot dish, sprinkle with sugar, garnish with a sprig of holly. This pudding can be made some days before the dinner and reheated.

PUDDING SAUCE.

Mix the yolks of four eggs with an eighth of a pound of sugar, adding the grated rind of half a lemon. Stir this over the fire until it sticks to the spoon. Serve hot.

ENGLISH PUDDING.

Beat well ten eggs and stir into them a small cupful of flour in which have been rubbed three-quarters of a pound of chopped suet, one pound of seeded raisins, one pound of currants, one pound of brown sugar and one pound of grated bread. Mix these ingredients thoroughly, take a strong cloth wrung out in very hot water flour it freely and in this put the pudding. Tie it tightly, but leave plenty of room to swell and boil six hours. A saucer turned upside down in the bottom of the pot will prevent sticking. A hard sauce can be used.

WHITE FRUIT CAKE.

As this is a novelty, I know it will please all lovers of good cake. Cream two-thirds of a cupful of butter and add gradually one and seven-eighths cupfuls of flour in which has been sifted half a teaspoonful of soda, and then add half a teaspoonful of lemon juice. Beat the whites of six eggs until very stiff, adding one and one-quarter cupfuls of powdered sugar, then combine the two mixtures. Now add one teaspoonful of almond extract, two-thirds of a cupful of candied cherries, one-third of a cupful of blanched and minced almonds and half of a cupful of thinly sliced citron. Bake in a deep pan from fifty minutes to one hour.

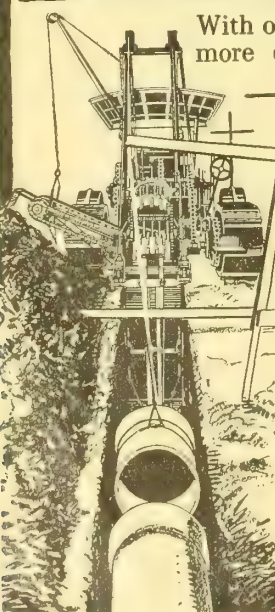
"George," she said, "before I give you a final answer you must tell me something! Do you drink anything?"

A smile of relief lighted his handsome countenance—was that all she wanted to know? Proudly, triumphantly, he clasped her in his arms and whispered in her shell-like ear: "Anything!"—*Dollar Bill.*

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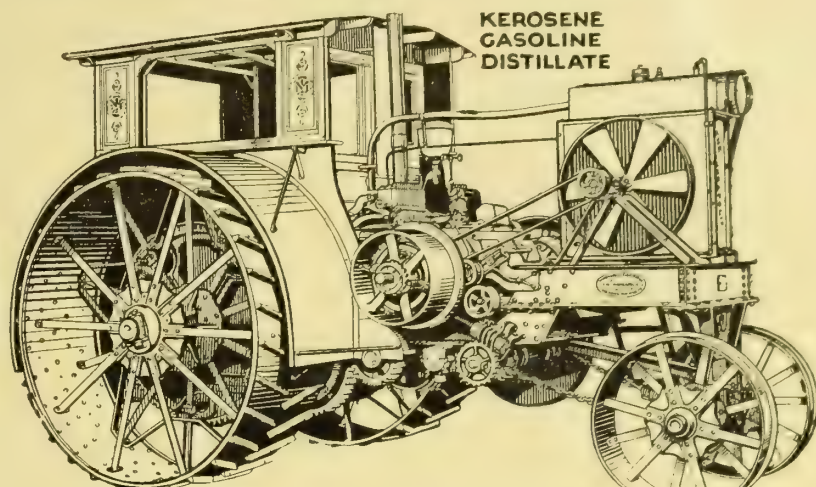
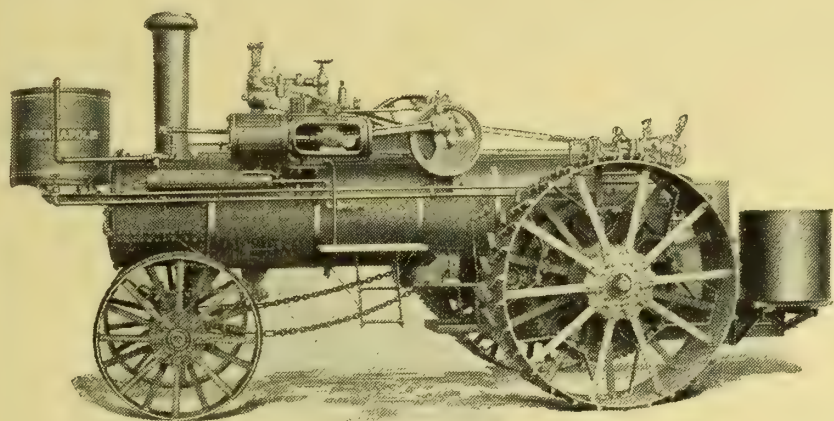
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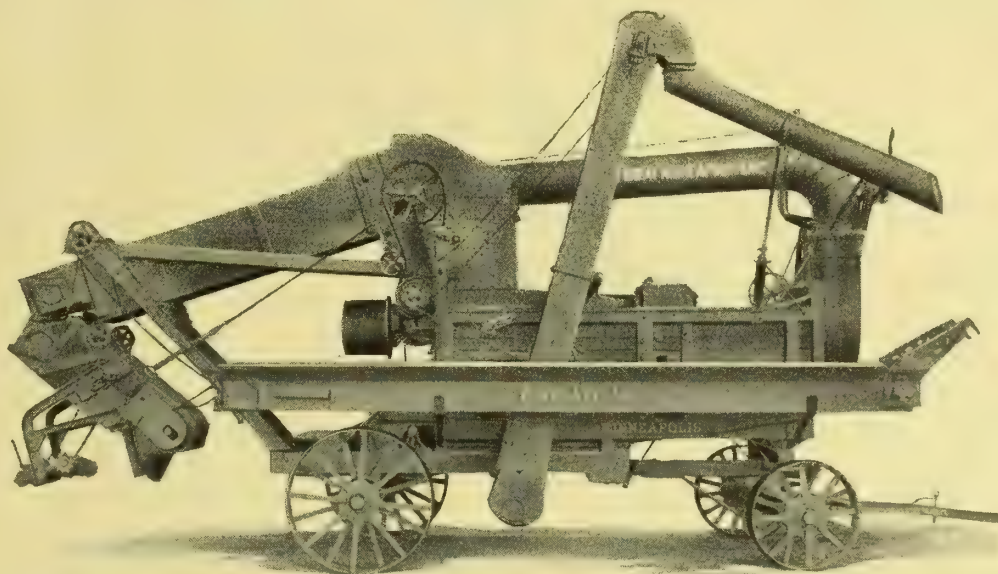


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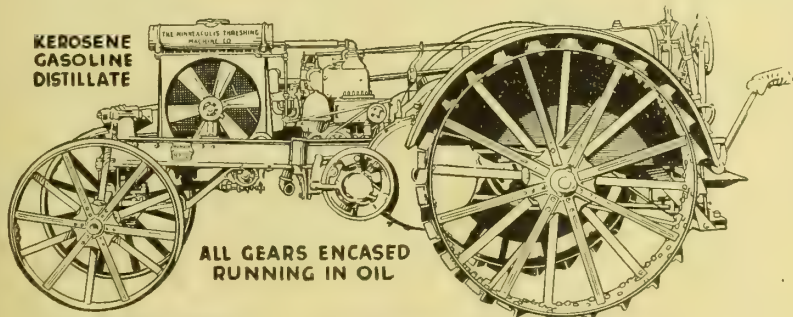


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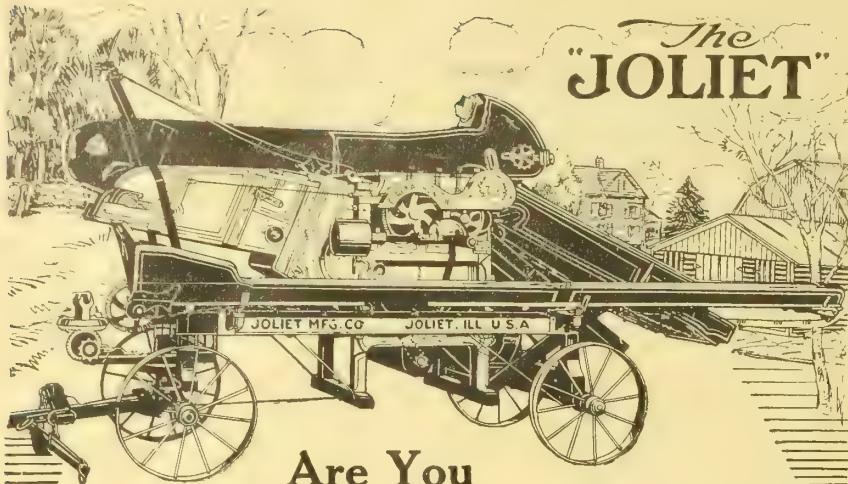
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Hiawatha and His Brothers

BY FRANK M. CHASE

MARY POWELL had forgotten to take her grade book to school. On nearing the schoolhouse, however, realization of the duties at hand caused her to remember with a start the missing article. Immediately she began to retrace her steps to the Mark Bonner farm a half-mile away, where she obtained room and board.

To the young man in an approaching motor car her decision to turn back came with a feeling of joy. From his first glimpse of the small, trim figure ahead he had wished she was going the other way. He applied the brakes, and in a moment the car slowed down at the teacher's side.

"Won't you ride?" he asked.

The rich, low voice seemed filled with sincerity, and Mary, slightly surprised at the unexpectedness of the offer, turned to look into the pleasant, earnest face of a man about twenty-eight, who instantly attracted her.

"I'd be glad to, thank you," she said, getting into the car. "I am in a bit of a hurry. I forgot my grade book this morning, and was just starting back to get it."

"So you are the teacher in the Bonner Corners school," the driver continued as the car started. "Do you live far from here?"

"Oh, no; only half a mile—with the Bonners."

"That's where I am going, too," said the man. "Mr. Bonner sent for me last night. He wants some help it seems in testing his seed corn."

"Then you are Mr. Stevens, the county agent," Mary returned. "I heard Mr. Bonner telephoning to you. I do hope you can help him. He had dreadfully poor luck with his corn last year."

"I think it is wonderful to be able to help the farmers with their problems as you are doing," she went on after a pause. "I wish I could do something worth while like that, instead of merely teaching a school which no one notices."

Ralph Stevens wanted to deliver himself of a little lecture on the spot. It was in his heart to tell the teacher at his side of the greatness of her work, if it did go unnoticed—worthy work was often so. He desired even to suggest that a still greater work might be hers, after the trials of the schoolroom had been replaced by the cares of a home.

But circumstances were against the delivery of that speech. Although he had driven all the way "on low," the ride from the schoolhouse seemed incredibly short to Stevens. Presently he found himself in the Bonner farmyard with his companion leaving the car. He

could only offer to return the teacher to her school.

"Thanks, ever so much. But you mustn't do that," Mary replied. "Really I have plenty of time to walk back now."

Mary wished to be alone for a few minutes' reflection. The events of the morning had opened up a new world for her, and she wanted to determine her position in it.

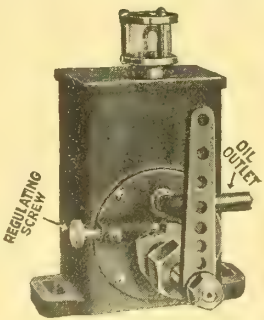
In the fields about her the farmers were beginning their spring work, preparing to plant and to sow once more with the age-old faith in abundant yields. Spring is the real starting time of the year, she reflected, wishing also for some new task to do. In her meditations Mary also questioned. Could these farmers honestly expect that their faith in their sowing would be bountifully rewarded? Well, she knew the virtual crop failure of the preceding year, and of the Bonner Corners farmers' unbelief in the county agent's work for better farming. It was only in desperation over repeated crop failures that Bonner himself had finally consented to permit Stevens on his place.

Mary Powell wanted to help these farmers. During that brief ride with Stevens she had caught a new vision of service, and the very fields seemed now to beckon her to the work. To do something, be it ever so little, to help the farmers of her school district as Stevens was helping those of other communities—this was her new ideal of service. "If only they could be made to let him help, that would be something," Mary reasoned with herself, her thoughts homing back to Stevens.

Quite suddenly, as she was about to enter the school yard, an inspiration seized her. Her face lighted up, her step quickened, and the youngsters at their before-school games quickly took note of the unusual happiness of their teacher. And if she failed to notice Johnny when he snatched Betty's hair ribbon in school that morning, or Betty as she repeatedly whispered to her seat neighbors, it was because she was too deeply engrossed in her plans to take much note of what the pupils did beyond reciting their lessons.

It was not until the noon hour, when Willie Bonner was dispatched on a mysterious errand to his home that any hint was given as to the reason for the teacher's changed demeanor. But the pupils were little wiser on Willie's return, for the message that he carried was contained in an envelope which the bearer had been instructed to give to the county agent temporarily at the Bonner home.

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They were not to be kept in suspense very long. At two o'clock the county agent's car drove up, and a moment later Stevens entered the schoolroom, carrying a strange bundle of cloth and an armful of corn in the ear. Immediately the class in Fourth Reading was dismissed, while Miss Powell introduced the agricultural expert.

His arrival had been a signal among some of the older boys for a relaxation in Miss Powell's usual good discipline, but Stevens seemed not at all perturbed by that.

"Boy's and girls," he began, "how many of you have read the story of Mondamin?" The hands of a dozen of the older pupils shot up.

"That's fine. How many times did Hiawatha wrestle with Mondamin before finally overcoming him?"

"Four times," came the chorus of voices.

"Yes, Hiawatha wrestled Mondamin four times. But there are farmers in this neighborhood who have wrestled with their corn crop forty times, and they haven't thrown it yet."

The boisterousness ceased at this point. Here was the spirit of conflict, and every red-blooded boy is interested in a fair fight.

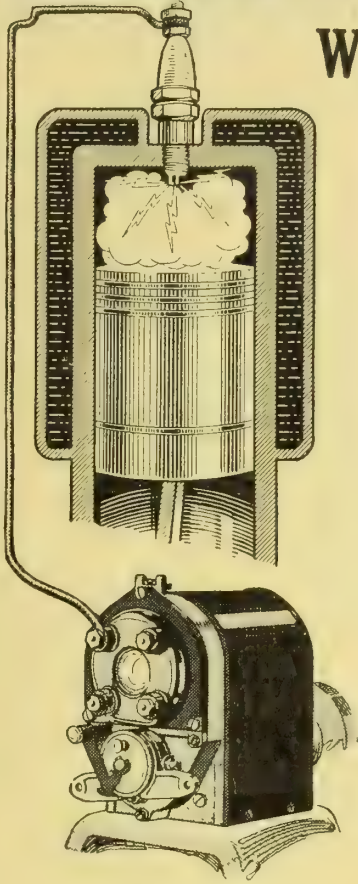
"These farmers have learned how to throw their seed corn into the ground, all right," Stevens continued "but that is about all. It hasn't been growing very well for them, and before the season is over they give up—licked again.

"Now when you fellows grow up, are you going to let a stalk of corn whip you? Of course not. You're going to lick Mondamin, and I'm here to tell you how to do it. You can lick Mondamin with the magical dolls that I am going to show you how to make."

"Magical dolls." These were magic words indeed. At their utterance the attention of every little girl in the room, from the primary class to those who already had been interested in the new sidelights on Mondamin, was caught.

The remainder of the demonstration was easy. Soon the little tots, and the larger pupils as well, were crowding about the table at which Stevens worked. As he cut the muslin into strips, marked it off into squares and put four kernels from the ears of corn that he had with him into each square, he explained in simple language why it was necessary to test the seed corn if good results were to be obtained and showed just how every operation should be performed. Eight sample rag doll testers were at last completed, seven of which were named after the days of the week on receiving their "baptism" in warm water.

"Now how many of you little girls have dollies at home?" Stevens



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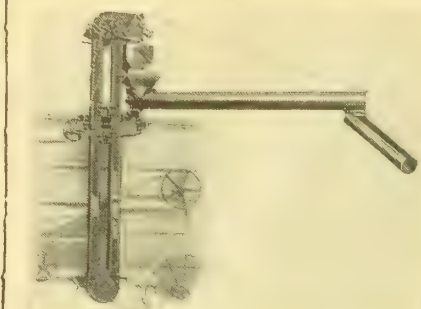
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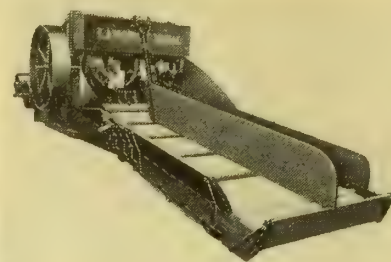
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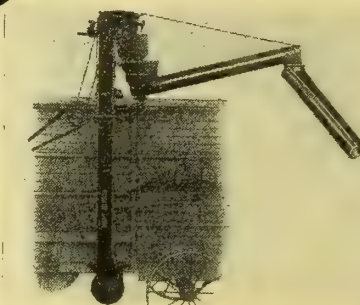
THE BETTER FEEDER
Dependable because per-
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THE HART JR. LINE
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AS STANDARD EQUIPMENT
BE SURE YOUR SEPARATOR IS HART EQUIPPED
OVER 30 DIFFERENT STYLES OF WEIGHERS AND SELF-
FEEDERS FOR LARGE AND SMALL SEPARATORS
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HART GRAIN WEIGHER CO.
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HART JR. WEIGHER
(CODE - HARSING)

LANGDON JR. SELF FEEDER

Mention The American Thresherman and Farm Power

inquired, looking down into the eager little faces that fringed the table.

"Seven," he announced, after counting the hands of those young enough not to be ashamed of still playing with dolls. "Then I know that you would like to take care of one of these magical dolls, too," he went on, handing each little girl a rag doll, with instructions to keep it in a warm place, as in the sunlight of a window.

"But what shall we do with the remaining doll?" Stevens asked. "He's the biggest one of all, too."

"Call him Hiawatha, because he licked Mondamin," Tom Miller, the largest boy in school, suggested.

"That's a bully idea," said Stevens "and lets make Miss Powell responsible for Hiawatha. Then she can set a good example for the rest of you in caring for his brothers."

It was an interested and enthusiastic group of young folks who emerged from the Bonner Corners school when it was dismissed that afternoon. As they separated into twos and threes on their various ways homeward, little Jennie Foster and Jane Cooper discussed plans for their new dolls, Tuesday and Thursday, while Tom Miller depicted what he was going to do to Mondamin, demonstrating with mock blows at Willie Bonner just how he would lay low the corn crop's ghost.

Mary, elated over the success of the afternoon's demonstration, busied herself with further plans for the new work that she had undertaken, and did not leave the schoolhouse until the supper bells had begun to ring. Meanwhile the county agent's story of Mondamin and of the magical dolls had spread surprisingly fast. So thought Mary, at least, who was quite unprepared for the roadside reception which waited her.

Mrs. Foster was at her dooryard gate as Mary came along. Apparently she had been waiting some time, rehearsing to herself what she would say. She was a large, determined person, and her wrath had been gathering ever since her daughter had brought home the news of the magical dolls. Upon the teacher's appearance, it came out as a flood.

"Miss Powell, I hear you are giving your scholars dolls to play with in school," began the irate woman. "Now I want you to understand that I am not sending my girl to school for any such purpose. If you can't learn Jennie anything better than to play with dolls, she's going to stay home where she can at least help me. Magical dolls! Pooh! What on earth are they good for, anyway? And who's that bad Mondamin boy all the other boys want to kill? Mrs. Miller called up a little while ago and said Tom came home carrying

on just awful, pretending he was killing this boy. Mighty queer actions, I should say."

Mary Powell was blessed with a sense of humor. It had smoothed many a difficult path for her before, and it came to her rescue now. She almost laughed outright, but managed to suppress her impulse into a smile.

"Really, Mrs. Foster, I am afraid you don't quite understand," she said seriously. "Those magical dolls which Mr. Stevens made for us this afternoon are truly remarkable. I feel sure they are going to help every one of us. I do wish you would come to see them. Can't you come—say tomorrow afternoon? Visitors are always welcome, you know, and we have had very few of them this year."

Disarmed, Lottie Foster gazed in amazement at the spectacle of a schoolteacher taking magical dolls seriously. "Well, I don't know," she said, somewhat meekly. "I'm pretty busy at this time of the year."

"I know you are—all of us are," Mary sympathized, "but please try to come. I know you will think it worth while."

"Oh, yes; you wished to know about Mondamin, too. He's not a really bad fellow, as you will see when you visit us. But he was one of that kind who simply had to have a good trouncing to bring out his better qualities."

Though she strove to hide it by hastening to her delayed preparations for the evening meal, curiosity already was getting the better of Mrs. Foster. After supper she telephoned Mrs. Miller, the two arranging to visit Miss Powell's school the following day.

To Mary the next morning, Jennie Foster carried the welcome information that her mother was to be at the school in the afternoon. The teacher arranged her plans accordingly. Quite unexpectedly, therefore, the class in Seventh Reading which was studying Hiawatha, reviewed the earlier parts of the legend as their recitation that afternoon, not omitting the description of the hero's wrestling, which Tom Miller read in a highly spirited manner.

During Tom's reading Mrs. Foster's face was a study in conflicting emotions, but she saw it through heroically. Needless to say, she did not thereafter mention "that bad Mondamin boy."

At the first moment of recess the two guests became the center of an eager group of children, who at once implored them to see the magical dolls. From time to time the eyes of the two women had wandered to the mysterious row of doll-like forms in the west window, and they were glad to at last satisfy their curiosity.

"See, mamma, this is Sunday and here's Monday," said little Jennie as

she identified the respective rag dolls for her mother. "And this is Tuesday—that's my dollie."

"And to whom does the big one belong?" asked Mrs. Miller, who also was becoming keenly interested in the magical dolls.

"Oh, that's teacher's," interjected Betty Hawkins. "His name is Hiawatha, 'cause he licked Mondamin."

"Well, I declare," Mrs. Foster ejaculated. "You have them all named just as you do your dolls at home. But I don't see why you call them 'magical dolls.' What do they do, anyway?"

Question followed question, the children answering them while Mary gently guided the conversation. Bit by bit the story of the magical dolls was told—how the kernels sprouting in the rolls of muslin would indicate the ears suitable for seed, and how by using these testers the farmers could

be surer of raising good crops of corn.

"Well, I declare," Mrs. Foster repeated a dozen times during the explanations, both she and Mrs. Miller growing more interested every minute. "Nobody ever heard of such things when we went to school, did they, Kate?"

The two women said little as they returned to their homes, but it was evident that they carried with them a higher respect for Miss Powell and her work than they had had. They also shared a new idea.

William Foster noticed at supper time that his wife was unusually thoughtful. For this, however, he did not know the reason until the evening chores were over, whereupon she engaged him in a frank conference concerning seed corn. And in this Mrs. Foster did not deviate from her usual custom of having the last word.

(To be continued.)

Link Chains

BY J. CROW TAYLOR

ONE of the things which so far it has been impossible to determine and set up definite rules about is when to repair and when to replace link chains. Plainly there are times when all a link chain or pair of chains needs is a new link here and there. Also, at times, instead of repairing chains, they should be replaced with new ones because they have worn and become so weak that they are uncertain and are likely to give way and cause delays which make much trouble and expense. True economy at such times demands new chains.

The difficulty about laying down any hard and fast rules comes from the fact that the duties required of such chains are so variable that a rule which would apply to one would not apply to another. Inquiry among the makers of machines as to when chains should be repaired and when they should be replaced seldom brings anything in the way of definite advice. This is due partly to the fact that the makers of machines do not follow them carefully through the different stages of wearing out, as they do any other specific parts. Chains can be bought from many different sources, whereas specific repair parts for individual machines must come from the machine manufacturers themselves. Thus the machine men have a better understanding of other specific machine parts, and their wear and replacement; than they have of chains.

Broadly speaking, where the service is light, chains can be used until they are worn perhaps more than half way through the thickness of the metal at the wearing points. There are two wearing points in a chain. One is the wear of the sprocket-wheel

against the chain in meshing and pulling. The other is the wear of the chain joints themselves in pulling and bending over the sprocket wheels. When the wear becomes such that under the strain of ordinary work the chain frequently gives way, this may be taken as a warning that it is time to replace the chain with a new one through and through instead of repairing it with a few links.

On the other hand, if through some hitch a link is broken or kinked, or if the breaking comes from some unusual strain or shock and not from the regular wear or tear, it is plainly a case for repairing the chain instead of replacing it. This logic applies whether it is a single chain used for driving purposes or a pair of chains used with flights for carriers. In each case one should seek to guard against strains and hitches likely to break the chains, things not properly a part of the natural work. When breaks from these causes occur, however, it is a case for repairing with new links. But when breaking occurs, and is repeated under the natural strain of normal work, it is time for new chains.

In lubricating sprocket chains, where oil or grease is used, the addition of flake graphite will assist materially because graphite is one of the best dry lubricants for metal parts and it will assist materially in reducing the squeaking noise as well as in eliminating friction and wear.

He (watching another couple)—I suppose he feels that he could not live without her.

She—Yes, and I don't think he'll have a chance to find out that he could.—*Boston Transcript.*



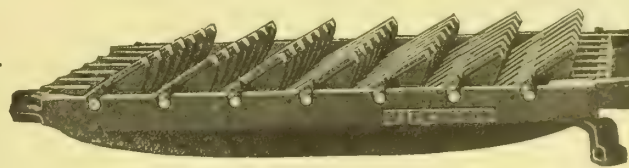
Profits in the Farm-Lumber Business

Your tractor and an "American" Portable Saw Mill will enable you to make lumber from the trees standing on your wood lot, at the mere cost of sawing. An "American" Portable Variety Woodworker or an "American" Combination Saw Bench will enable you to work this lumber up into all sorts of moulding, trim and other finished stock, at the mere cost of power. Lumber was never as high as at present. Profits in the farm-lumber business were never as great as at present. Seize this opportunity to make the most money off of your wood lot.

Write for Bulletin 77 and the Farm Saw Mill Catalog

AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, N. J. NEW YORK, N. Y.
71 Main Street 1371 Hudson Terminal

Mention The American Thresherman and Farm Power



Improve the Steaming Qualities of Your Boiler

Free continuous draught through your fire means better combustion of gases, more heat, more steam and one hundred per cent satisfaction. Poor draughts mean dirty fires and low steam. The fuel passes up the smoke stack unburned.

You have put the coal in the fire box. You have labored for hours. The steam gauge shows that the steam pressure has dropped. You are seeking more power. The separator is lagging. What can be the trouble?

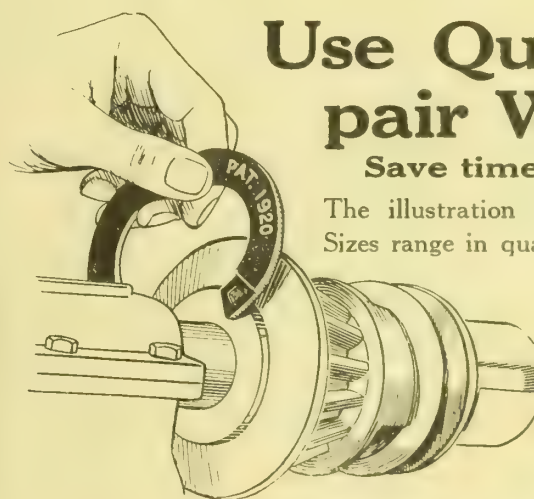
Travis says, "Use better grates." Use TRAVIS ROCKER GRATES. They force open every inch of air space. The draught is regulated at the will of the operator. Combustion is normal.

You should be interested in your grate problems. Give length and width of your fire box. We will give you prices and information.

G. E. TRAVIS COMPANY

HENRY, ILLINOIS

Mention The American Thresherman and Farm Power



Use Quick Repair Washers

Save time and money!

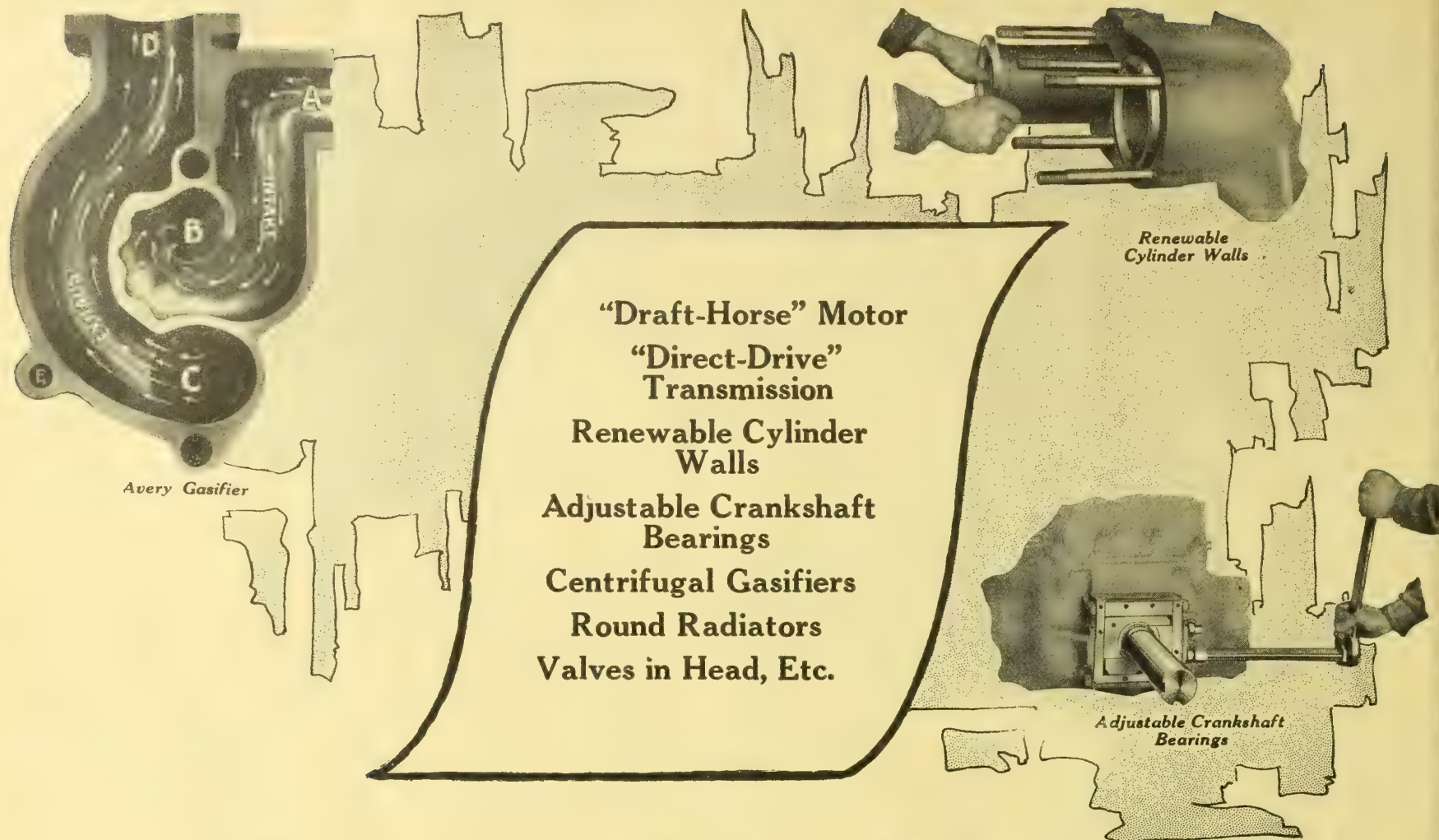
The illustration shows how it is done. Sizes range in quarter inches as follows:

Steel Sidelatch 1" to 1 3/4"—Steel Overlatch 2"—Machined Brass Overlatch 2 1/4" to 5".

Prices and complete information upon request.

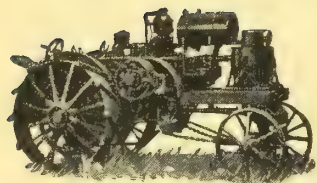
QUICK REPAIR WASHER COMPANY
Traction Terminal Building Indianapolis, Ind.

Mention The American Thresherman and Farm Power

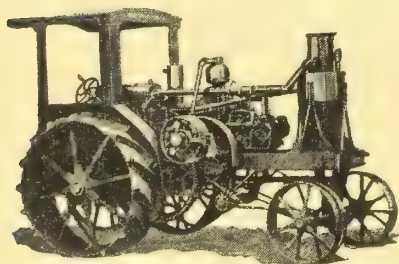


Features That Make Avery

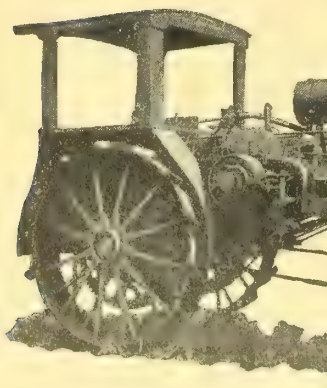
In every machine in the complete Avery Line, there are many features designed by Avery engineers and put there purposely in order to give you the best possible service and save you time, labor and money.



8-16 H. P. Avery Tractor



12-25 H. P. Avery Tractor



14-28 H. P. Avery Tractor

In Avery Tractors, for instance, there are the Avery "Draft-Horse" Motor, "Direct-Drive" Transmission, Renewable Inner Cylinder Walls, Adjustable Main Crankshaft Bearings, extra large practically unbreakable crankshaft, and Centrifugal Gasifiers. These are just a few of the Avery Tractor features that make these machines go out into the field, do good work and last a long time.

Ask any owner why he likes his Avery and he is sure to mention to you one or more of these exclusive Avery features. They mean much to him as a successful tractor owner—and they also mean as much to you as a prospective tractor buyer in picking out the right tractor for your work.

Let an Avery Tractor owner tell you about the advantages of the Avery "Draft-Horse" Motor. Let him show you how the adjustable main bearings may be taken up from the outside with the aid of an ordinary socket wrench. Let him show you how, after years of hard service, by putting in new cylinder walls you can *re-energize* your

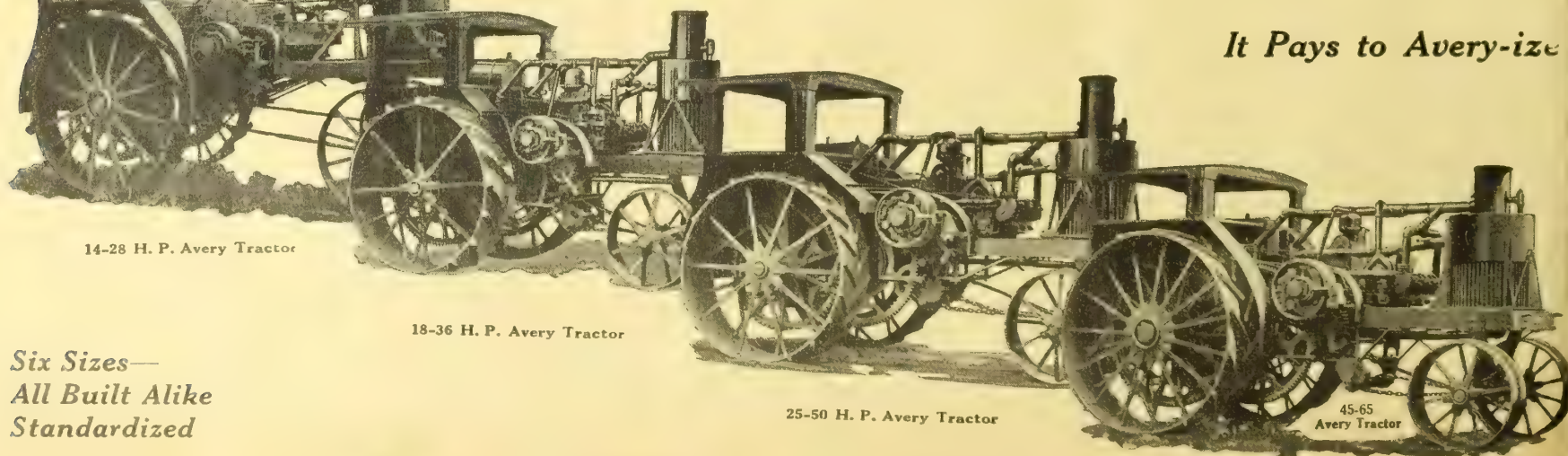
motor and make your Avery Tractor *new* again. Let him show you how the valve-in-head motor gives you more power and how the centrifugal gasifiers turn kerosene or distillate into gas and *really burn* it.

Also let him tell you of the Avery "Direct-Drive" Transmission and how it delivers the power of the motor to the drawbar with the *minimum* of gears and shafting, and how *all* the power of the motor is delivered in the belt.

Learn about these and some of the other Avery features and the result is pretty sure to be an Avery for you. No matter what size farm you have, you can get a size Avery Tractor to exactly fill your needs—Avery Tractors with all these features are built in six sizes 8-16 to 45-65 H. P.

As one Avery owner says: "I like to tell people about my Avery tractor because it has real worth-while features which put it in a class by itself and I know that these features are a real benefit to the man who buys an Avery."

It Pays to Avery-ize



Six Sizes—
All Built Alike
Standardized

18-36 H. P. Avery Tractor

25-50 H. P. Avery Tractor

45-65
Avery Tractor

Automatic Straw Governor

Anti-Friction Bearings

“Guaranteed-for-Life” Cylinder Teeth

I. X. L. Grain Saving Device

“Duplex-Automatic” Straw Governor

Double Cone Pulley Belt Guide, etc.

Hyatt Roller Bearings

Tool Steel Cylinder Teeth

IXL Grain-Saving Fingers

Machines Give Good Service

Avery Separators too, have many exclusive features that make them better grain-threshers and grain-cleaners. Also features that have made them the *Champion “Grain-Savers”* of them all and features that make them last a long time.

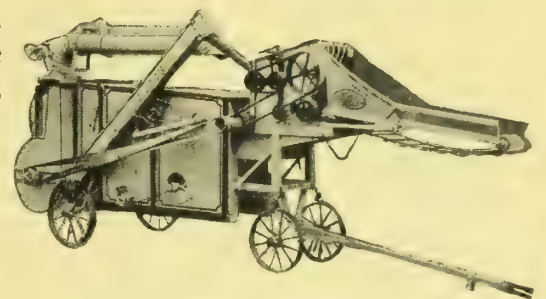
Some of these features are: Roller Bearings on the wind-stacker and fan shafts that make them extra light running. Genuine tool steel cylinder and concave teeth that are *guaranteed-for-life* against breakage, I. X. L. Grain-Saving Device with fingers that hunt in the straw around for the last kernel and get it. Also the new “Duplex-Automatic” Straw Governor that controls both the amount of straw delivered by the carrier into the feeder and, second, the amount of straw fed into the cylinder, its action being governed entirely by the volume and condition of the straw.

Write For the Avery Catalog

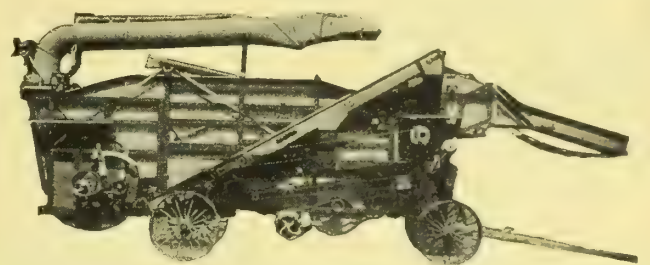
But Avery Tractors and Threshers are not the only machines in the complete Avery Line that have exclusive service-producing features.

The Avery Motor Cultivator, the Six-Cylinder Avery Tractor, the New Avery Motor Truck, the Avery “Self-Lift” Plows and Tillage Tools, the Avery Roller-Bearing Silo Filler—all have exclusive features that will give you genuine service for long years to come.

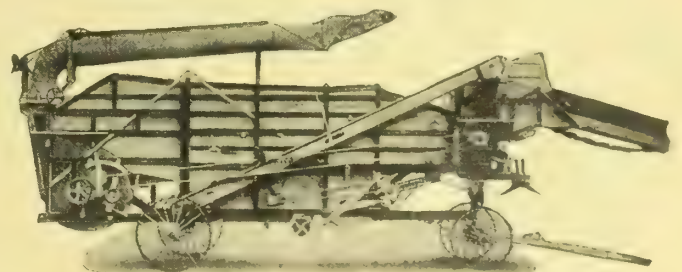
The new Avery 1921 Catalog will soon be ready. Your copy will be sent you on request.



Avery “Yellow-Baby” Thresher—22 x 32 in.



Avery “Yellow-Kid” Thresher, 20 x 30 and 24 x 36 in. Roller Bearing Equipped.



Avery “Yellow-Fellow” Thresher, 24 x 40, 28 x 46, 32 x 54 and 36 x 60 in. Roller Bearing Equipped.

“A Good Machine and a Square Deal”

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334 Iowa St. - - - Peoria, Ill.

AVERY

Tractors, Trucks, Motor Cultivators,
Threshers, Plows, etc.

Branch Houses:

Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Nebr.; Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and Sacramento

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Avery Company of Texas: Dallas, Amarillo and Beaumont, Texas. Avery Machinery Co., Denver, Colo. Also other principal machinery centers.



Look for the
Green Edge
and **GANDY**
Trade mark!

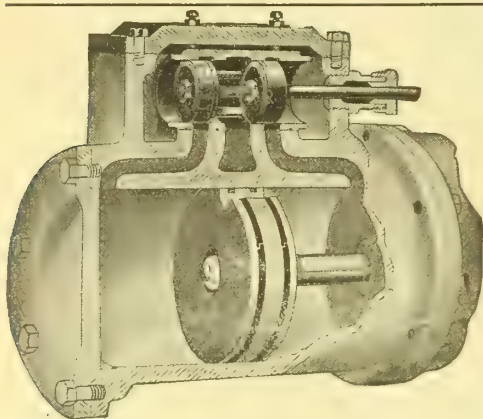
THAT'S the only caution necessary to sound to buyers who want to be sure they are getting genuine *Gandy* original stitched cotton duck THRESHER BELTS.

All *Gandy* Belting is red in color, and the bright, green, painted edge and trade mark are plainly visible.

These two distinguishing marks are on every *Gandy* Belt. They're proof of our own faith in our product—our bond to you that we stand back of every inch of *Gandy* Belting, guaranteeing to the limit the material and workmanship, and providing engineering service that insures the very best results.

Gandy gets all the pull from the pulley.
Look for the green edge and *Gandy* trade mark!
Yours for service, "On-the-Job" *Gandy*,
Service Manager.

THE GANDY BELTING COMPANY
729 West Pratt Street Baltimore, Md.



Stop!

Put an end to valve troubles, hard running engines, broken eccentrics, and wastes in fuel and power by using the GUARANTEED Baker Balanced Vapor Tight Valve. It is an investment to be proud of.

Send \$10.00 to hold the low December price or write for illustrated catalog and price list. Do it now!

Baker Valve Company
Box 1772, A. T. Minneapolis, Minn.

Keep the Machines
In Continuous Operation
by Using

"PALMETTO" PACKING

Made to give long, satisfactory service under hard conditions. The small amount of packing required for a stuffing box costs far less than the labor of applying it, and for that reason a long-service packing is economical because it saves labor and keeps the machines constantly employed.

Braided for Rods

If in doubt, let us send you a working sample. No charge.

Greene, Tweed & Co.
Sole Manufacturers
109 Duane St., New York

Twist for Valves



Listen To Me

DON'T be a crepe hanger. If people are having a good time and doing well, don't pull that old long face with the "you'll pay for all this" look or you'll be as welcome as a polecat at a wedding.

POLITENESS costs nothing. It not only leaves a sweet after-taste, but has in a great many cases been of financial benefit. It tends to make fellow feel he was a part of things.

LOT'S wife looked back and was turned into a pillar of salt. She had a good chance for a clean get-away, but she was "nosey" and wanted to see what was going on "behind the scenes." The Lord makes good on all his propositions, but he also expects you to go fifty-fifty.

AN ostrich buries its head in the sand and imagines it hides him completely. It doesn't pay to play ostrich in life's game. You can't hide being on the square any more than you can hide being crooked. The public will find you out either way you go. Jails and "pens" are not filled with fellows who went straight.

SOMETIMES it takes a long, hard stretch of being on the "chute," to bring out the best there is in a man. It's a cinch you will stay where you are if you don't put on the emergency brake and then throw in the reverse. An engine that runs smooth when it's idle doesn't amount to a great deal. What counts is what it will do when the clutch is thrown in. Same applies to the human being.

THERE was no scarcity of help in the days when "hired girls" ate at the same table with the family. They were treated like human beings and probably if a little of the old fashioned system was used now it might not make them feel as if they were lowering themselves to do our housework. Too much "codfish aristocracy" is more to blame for conditions now than anything else.

THE biggest "act" that much loved Harry Lauder, the eminent singer and Scotch comedian, ever "put over" was on the stage of life. In the late war his only son "Jock" was killed in battle. Instead of going into retirement and burying himself in grief, he packed his kit and went to the front and sang funny songs, and told funny stories to the boys on the firing line and gave all his time to them to keep their spirits up, all the while with a breaking heart for he loved his boy as few are loved. He lost his boy, but he won the "heart of the world."

DON'T be selfish and want to corral everything in sight. Give everybody an even break, and be willing to let the other fellow get his. Try and plant a few dollars in the "family sock" and don't blow the whole works just because you have it. It may be coming easy now, but there also may come a time when it doesn't come so easy and it sure is fine to have some "planted" when that day comes. You don't have to be a tightwad either, but it were better to be one than to "shoot the works." It is not the fellow with money in his pocket who is causing all this discontent, but in nine cases out of ten it is the fellow who spent it as it came in and can't see the justice in some one else getting along good when he is in the shape he is in. If you can't save a hundred at a time, save ten and if you can't save ten save one, and it won't be a great while until you will have money working for you instead of your working for money and it is wonderful how a man changes from a discontent to a content and how his views change when he does save a little "stake." Instead of "clawing" at the wheels of commerce, make yourself one of the wheels.

WHAT are we going to do about our soldiers? We sent them away with parades, bands and cheers, and told them "to hop to it." I'll tell the world they "hopped to it." Now they are back with their job well done and we are just letting things drift as far as they are concerned. Suppose they had gone over there and let things drift. Where in the devil would we all be at this time? God only knows. It was pretty soft for us that we could stay at home and have all the comforts we had. Suppose it does boost taxes and run the country deeper in debt. We should be darned thankful that we have the opportunity to show them our appreciation. You know some of them came back minus arms, legs, eyes, and with other disablements. They all came back with a different view of life and with the right to demand their due. They earned it and that is more than a lot of us have done. They fought for you and me and we owe them a lot, and it is up to us to pay them one way or the other. Let's be just as good sports as they were, God bless 'em, and show them now, when they need it, that we are right there "Johnny on the spot." They saved our bacon, let's save theirs.

It Pays to Motorize

(Continued from page 10.)

that farmers could be sure of adequate help at harvest time. Smith's neighbors turned to him. He had a reputation for doing things in a hurry. The local farmers dreaded spoiled grain, forced plowing and late plowing. So did Smith. He decided to buy a separator and do his share in winning the

Smith bought a 28x48 separator in 1917. Since then, he has threshed over seven thousand bushels of grain in each year—not a high figure for a custom-man, but a respectable record for a man who turned threshing to help his neighbors.

Having no illusions about his ability as a mechanic, he made his separator, Christian, act as separator boss. Chris has kept the machine in first-class condition for four seasons.

The belt-power for the first three seasons was not to Chris's liking. After looking over his general farm requirements, Smith went to Silene, in May, 1920, and bought a 40 tractor. This was the size that seemed logical, in view of the fact that Smith had four different jobs in and for it.

During wheat cutting, this tractor pulled a twelve-foot binder. It traveled half again as fast as horses, required no noon-hour, no stops for plowing, and very little mechanical

attention. When the time was ripe for cutting, that twelve-foot binder went through the fields like a buzz-saw through willow logs. You couldn't stop it.

Then threshing came on. With the tractor furnishing the belt-power, Chris and his separator could run through nine hundred bushels of grain in an eleven-hour day. On this schedule, the rig threshed over five thousand bushels of wheat and twenty-four hundred bushels of oats. The only job performed around the machine by horses was the hauling of bundle-wagons—and some fellows wanted to use small trucks for that work. That the outfit did a good job of threshing is testified by the record.

Smith's wheat, and that of his neighbors, was about the average for that section and that county. The average yield for Dickinson County, in 1920, was about eighteen bushels per acre. The average yield in Kansas was 16.45 acres. As against this, Smith's wheat averaged twenty-three bushels to the acre, and it tested sixty-two pounds to the bushel. The crew consisted of five bundle-wagon men, two "spike" pitchers, separator man, engine man and truck driver. Four years ago, the average threshing crew, to do this same work, would have needed at least five more men.

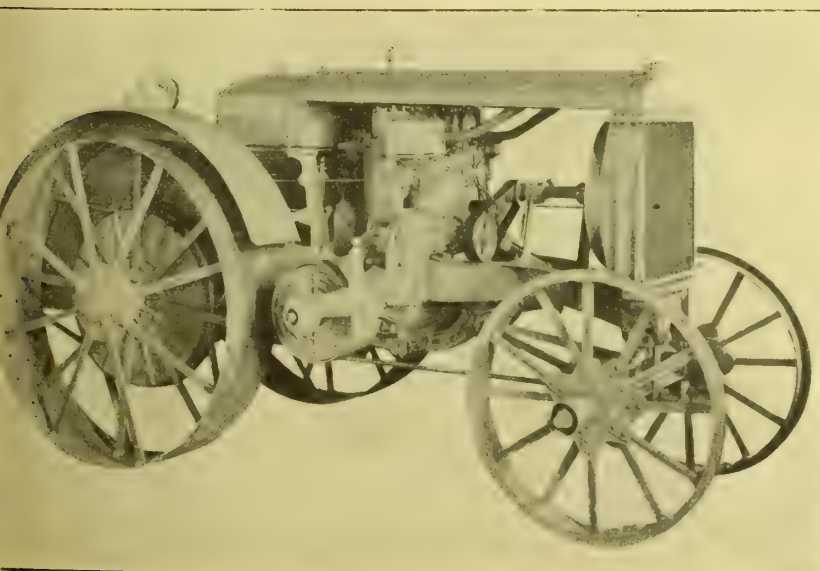
New Model Announced

RECENTLY gathered figures show that the 15-30 size of tractor is a close second to the 10-20 for popularity on all classes of farms. The Minneapolis Threshing Machine Company realizes this, for their new 17-30 model is merely a stepping measure for the size which is grown so popular.

The new model is a beauty in design and appearance. Weighing six thousand pounds, it has a four-cylinder, vertical valve-in-the-head motor with four and three-fourths inch bore and seven-inch stroke.

With a length of eleven feet and width of six feet, its low, compact design gives it an appearance of solidity and safety that is hard to beat. Both side and rear views show the machine to be symmetrical; drivers are fifty-four inches high with twelve inch face, front wheels are thirty-six inches high with five-inch face.

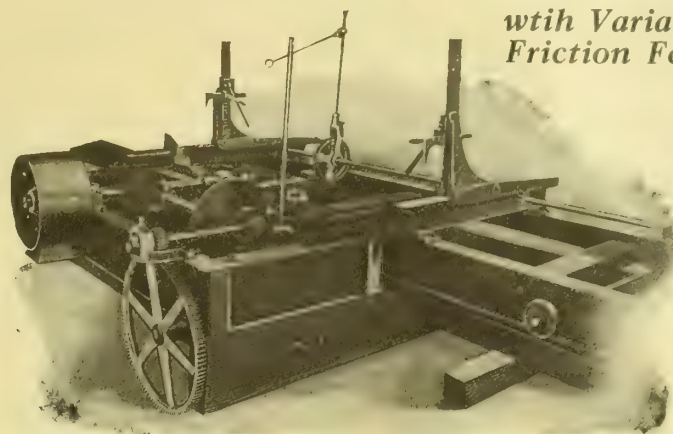
The normal motor speed of the new model is 775 revolutions a minute, the gearing providing speeds from two to two-and-seven-tenths miles an hour. The construction of the machine is such as to allow these speeds nicely.



An Old Friend in New Clothes.

Dixie "G" Saw Mill

with Variable Friction Feed



America's Most Popular Small Saw Mill

— Thousands in Use —

CAPACITY: 2,000 to 10,000 feet per day with 8 to 20 H. P. Steam, or 12 to 30 H. P. Gas, Kerosene or Tractor Engine.

HILL-CURTIS COMPANY

1504 North Pitcher Street

Kalamazoo, Mich.



The Threshing Rig Shown Below is Equipped with a

Buller Automatic Coupler

and the user is highly pleased with the coupler—Read what he has to say



"Am sending you a photo of my rig, which has a Buller Coupler on it. Will say that I would not run a rig without one, for all you have to do is to back up, hit the pin and go ahead."—Very truly, H. L. Kruckman, Sacred Heart, Minn.

It is True. All you have to do when coupling your separator to your engine with a Buller Coupler, is to back up, hit the pin and you are ready for the next job.

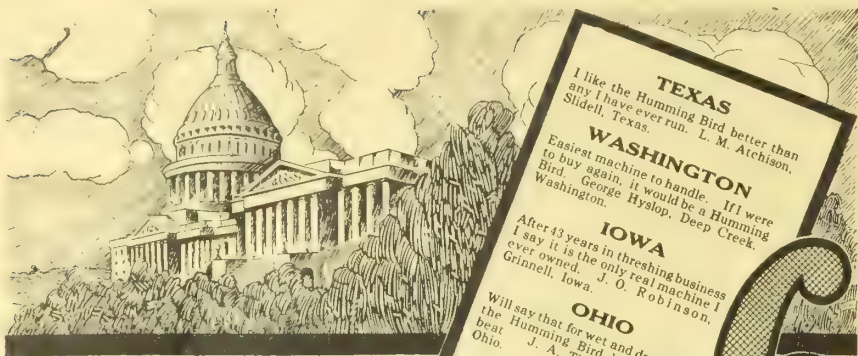
A few more reasons why you should have a Buller Coupler on your outfit:

- They are great time savers.
- They are great labor savers.
- And of still greater importance, great finger savers.

The Buller Coupler will save you enough time in a few weeks to pay for itself. And they are sold on 10 days' trial. Money refunded if not satisfactory.

Write today for catalog, giving make of your engine. We have reduced our prices considerably.

BULLER COUPLER CO. HILLSBORO, KANS.



The National Favorite

From almost every state in the Union, the verdict is unanimous, "The Wood Bros. Humming Bird Thresher can't be beat."

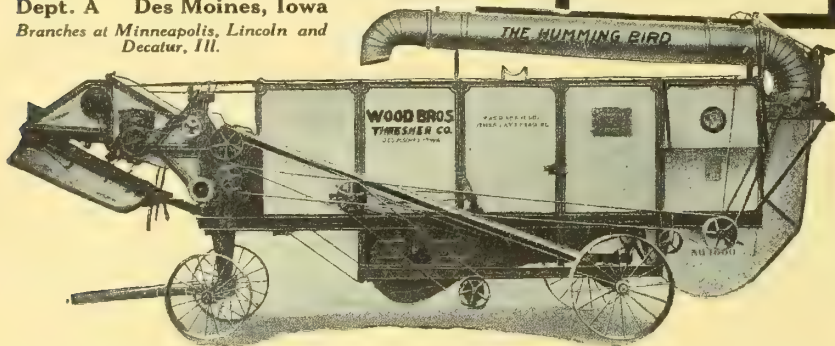
Wherever they go the Humming Birds make friends. Sturdy, faithful, doggedly persevering, they drive through the hardest kinds of threshing jobs with the least expense, trouble or attention of any kind.

Ask any of our hundreds of users about the Humming Bird with its low operating cost, durability, improvements, lightness and simplicity. Take their advice and your choice will be a Wood Bros. Humming Bird. Write us at once for complete description of our line of Separators and Threshing Engines.

WOOD BROTHERS THRESHER CO.

Dept. A Des Moines, Iowa

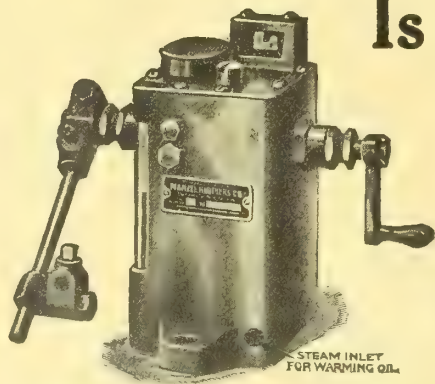
Branches at Minneapolis, Lincoln and Decatur, Ill.



Reasons

1. Low operating cost.
2. Ability to handle unusual and difficult grain under all conditions.
3. Durability—stronger and more permanent materials—all steel construction, least repair expense.
4. More modern improvements that save all the grain.
5. Lightness—less power.
6. Simplicity—fewer parts.

An Oil Pump That Is Different



Contains no ball valves, checks or delicate springs and has no complicated mechanism. It operates on the piston valve principle. No possible chance of dirt or chaff interfering with its positive operation.

The Manzel Oil Pump — Model "XD"

is distinctly different from any other oil pump in many ways and has advantages found in no other force feed lubricator. It is absolutely positive in operation, and after you have set the feed to supply the amount of oil your engine needs you can give your entire attention to your other work. The Manzel will take care of the lubrication.

Sent on Thirty Days' Trial

If you are looking for a pump that will oil your engine cylinders right, whether plowing, threshing or on the road, in winter as well as in summer, that will reduce your oil bills, save your engine cylinders, and increase the H. P. of your engine, we will be glad to send you one on thirty days' trial so that you can see exactly what the Manzel pump will do for you.

Write for Catalog Anyway

MANZEL BROTHERS CO.

311-313 Babcock Street

Buffalo, N. Y.

Asked and Answered

Question of V. B. We bought a new threshing rig in 1916 but the engine has never given satisfaction. Can we compel the company to fix this engine?

Answer.—It would seem to us that it is rather late to present a complaint to a manufacturer about an engine purchased in 1916 which has never given good satisfaction. A claim presented during the first season would perhaps have had very much better chance of results. Most manufacturers, however, prefer to have their customers satisfied and if you are having trouble with your engine, we certainly should advise you to take it up with the manufacturer and see if he cannot suggest something that will help you to get the engine in the best of condition. At this late date I doubt whether you could make a complaint and compel the manufacturer to do anything, although you might have been able to compel him the first season. The manufacturer, however, probably will be glad to help you and advise you.

Question of R. V. In babbitt the crank shaft box, is it best to wrap the shaft with paper or not? I always have had more or less trouble with babbitt splashing as the box gets almost full. What is the cause of this?

Answer.—We should suggest that the shaft be wrapped with thin paper before the boxing is poured. Instead of using paper, some persons paint the shaft with white lead, or burn material in the box so as to coat the shaft well with soot. It is necessary that the shaft be covered with something so as to prevent the boxing seizing the shaft as it gets cool.

You speak of the babbitt splashing as the box gets almost full when you are pouring it. Are you sure that you cleaned the box cavity and shaft well before you started to pour the babbitt, so as to be sure there was no grease on the shaft? When the hot babbitt comes in contact

with the grease, it turns it into a gas which would, of course, cause the babbitt to splatter out of the box. It also may be that you have not provided an abundance of passage way for the air in the box to get out. If this is the case, the air which is penned in the box as the box becomes almost full of babbitt may cause the babbitt to be splattered out of the box.

Question of F. E. M. Will a weigher on a threshing machine threshing fifty bushels of wheat, over-run more or heavy wheat than on light wheat? If it will over-run on heavy wheat and fall short on the light wheat why should this be the case, supposing the weigher is to be set the same in both cases and the machine to be set level?

Answer.—A good weigher should be able to handle either heavy or light wheat without any very noticeable over-run. We do not know that this particular point has been brought to our attention before this, and we have been trying to think what theoretical reason there might be for a slight over-run in the case of heavy wheat.

It is true, of course, that a small quantity of grain will run into the weigher after the weigher begins to trip. Now if the machine is threshing rapidly in heavy wheat, the weight of grain which will pass into the weigher after it begins to trip will perhaps be a little more than if very light wheat were being threshed because if the same number of bushels an hour were being threshed, the volume of heavy wheat and the volume of light wheat passing into the weigher after the trip is commenced would be about the same and, of course, the weight of the heavy wheat would be a little more.

The makers of good weighers try to correct this error, I suspect, in calibrating their weighers, and in actual practice there should be practically no difference.

Alfalfa Experiences

BY IRA G. SHELLABARGER

IT is doubtful if there is any legume that is more desired and appreciated than is alfalfa. The value of this plant to farmers as a feed for livestock and a builder of soil is known everywhere, but unfortunately it will not grow everywhere for various climatic reasons and neither does it always thrive even where climatic conditions are right and this is due almost entirely to the lack of tile drainage, lime and inoculation. Or, in other words, the soil is too wet

and sour and both conditions may be overcome by the use of tile drain and lime. The lime may be applied in several forms but no attempt will be made in this story to tell of the different forms of lime because that is a whole subject within itself.

For fifteen years we have been growing alfalfa to a greater or less extent and we can not speak in high enough terms for this wonderful plant.

Our first field of alfalfa was grown

in a field that was naturally fertile but was not previously treated with lime or inoculation nor was it underdrained with tile but even with these conditions we grew a fine crop of hay from which we secured two cuttings each season for two years. After this, bluegrass got a foothold and sheep were pastured in the field for a short time; then hogs were turned in along in July and the following spring this field was plowed up and planted to corn. In the meantime four strings of tile were laid in the field and the following spring tobacco was planted here which was well fertilized and this crop was a fine one, due to alfalfa sod, hog dropping fertilizer, good cultivation and a favorable season.

The tobacco field was sown to wheat and in February, 1917, alfalfa was sown on the wheat to the extent of about two pounds per acre in the same manner that little red or English clover is sown. The seed was sown early in the spring that the freezing and thawing would burst open the shell covering the seed proper. This left Nature to scarify the seed. Many are recommending that the seed be scarified, that is, that in some way the hull enclosing the seed be cracked that the seed can begin growing at once. This alfalfa grew splendidly and gave us several fine crops of the best kind of hay. This particular field will need be plowed up next spring because bluegrass is smothering out the alfalfa. This might have been overcome, at least we might have secured another clipping of hay had this field been cultivated with a spring tooth harrow.

Delighted with this experience of growing alfalfa in a small field, an eight-acre plat was selected for the next seeding. This field was well tilled and quite fertile. The field was plowed early in the spring and the seed bed was worked down regularly until July when the seed was sown without inoculation, immediately after a rain. The seed was lightly harrowed in with a spike tooth harrow.

This alfalfa grew fine and without the winter in good shape and our neighbors remarked that we had a very promising field of alfalfa.

In early summer one early cutting was made but before the entire crop was hauled into the barn a heavy rain came and the field could not be gotten into with a team to cultivate the stubble as we expected to do, and bluegrass got such a hold that another cutting was not made but the field pastured and plowed up and planted to corn the next season and, of course, counting all the work done and time to grow this one clip of hay, it was grown at a positive loss and the field would have paid a much greater dividend if sown or planted to some other crop.

However, it was proved that this farm would grow alfalfa and, not discouraged with this last trial, another attempt was made and this trial was made on wheat stubble and this was only one acre, but off this plot a number of cuttings were made and it was plowed up only because it came right in a large field and to let it stand would be quite an inconvenience. This plot was planted to corn and the renter stated several times throughout the season, that this one acre of ground worked better, corn seemed to do better and yielded better than any other acre in the field.

Since two different fields of alfalfa have been successfully grown on wheat ground it is the intention to sow alfalfa in the same way as thus a crop is grown at minimum cost and if it costs too much to grow a crop of alfalfa it is a losing proposition and it may be better to grow red clover.

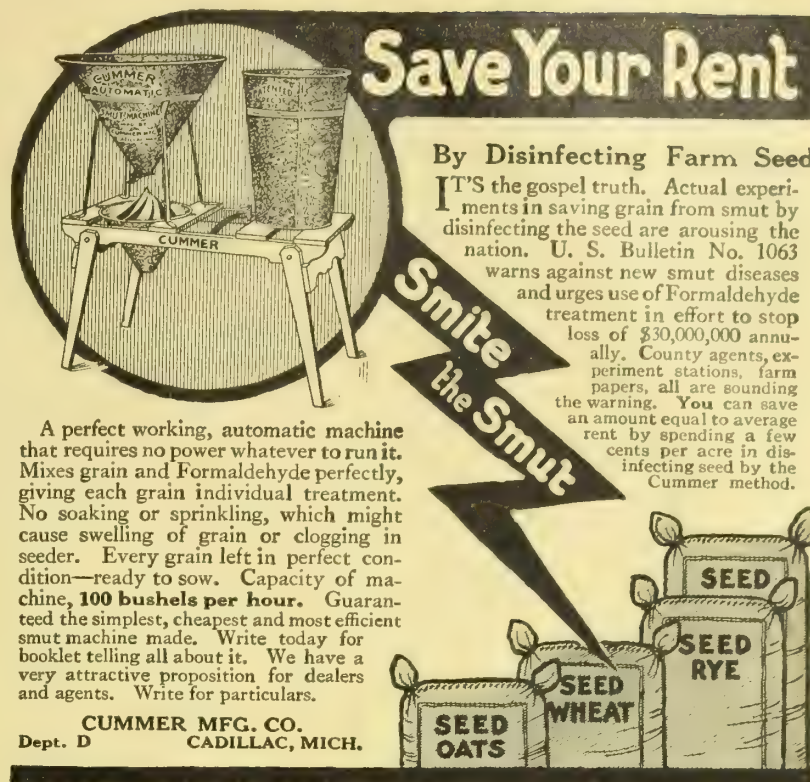
Each season when sowing red clover a small quantity of alfalfa is added and thus our whole farm is becoming gradually inoculated and we believe in time we can grow alfalfa on any part of our farm.

It might be added that we seldom feed alfalfa hay to our horses but feed it to cows and sheep, feeling that we get better returns than when fed to horses and besides, the horses do as well on timothy and clover while sheep and cows will not do so well on these hays. At different times small quantities of alfalfa have been fed to swine but its use was not continued long enough to ascertain to a certainty if it paid or not. Some farmers assert they feed it to swine and get fine returns.

When feeding alfalfa to sheep and cows it is fed in connection with good corn silage and of course this approaches a balanced ration and the results are quite gratifying.

Then if drainage and lime are supplied we believe it is possible to grow alfalfa, but, of course, if some sort of inoculation is employed the results are better and if all the conditions are complied with it is reasonable to expect success with alfalfa.

Wallace L. Lind, instructor in Mechanical Engineering Subjects at the United States Naval Academy, has written a book "Internal Combustion Engines," which has been published by Ginn & Company, and sells for \$2.20. This book tells about internal combustion engines in a clear, concise and straight-forward manner, and will make a valuable addition to the reference library of any tractor, truck, automobile or gas engine user. The subject matter is covered with the greatest brevity consistent with clear understanding. With the exception of one or two chapters, one does not need a great deal of mathematical training in order to understand the subject matter thoroughly.



Save Your Rent

By Disinfecting Farm Seed

IT'S the gospel truth. Actual experiments in saving grain from smut by disinfecting the seed are arousing the nation. U. S. Bulletin No. 1063 warns against new smut diseases and urges use of Formaldehyde treatment in effort to stop loss of \$30,000,000 annually. County agents, experiment stations, farm papers, all are sounding the warning. You can save an amount equal to average rent by spending a few cents per acre in disinfecting seed by the Cummer method.

Smite the Smut

A perfect working, automatic machine that requires no power whatever to run it. Mixes grain and Formaldehyde perfectly, giving each grain individual treatment. No soaking or sprinkling, which might cause swelling of grain or clogging in seeder. Every grain left in perfect condition—ready to sow. Capacity of machine, **100 bushels per hour**. Guaranteed the simplest, cheapest and most efficient smut machine made. Write today for booklet telling all about it. We have a very attractive proposition for dealers and agents. Write for particulars.

CUMMER MFG. CO.
Dept. D CADILLAC, MICH.

SEED OATS, SEED WHEAT, SEED RYE

Mention The American Thresherman and Farm Power

St. Louis Monday.

HEL-LO-o-o-o PETE:

In two more shakes of a lamb's tail I'd have been between the sheets—but I got taken with another *large* idea for Camel Cigarette ads that's so bright you can phone 'em to cut the current because you just had your lamps lit!

Tell you, it's a whale of a stunt! Everybody right quiet—and hats off! NOW—far as I know or ever heard, there never has been one of those zippy slogans under that big display name "Camel," I'VE GOT ONE—get me? Put both your ears close to the ground and get the rumble of a broadside like this:

Camel

Once it meant an animal—
now a Cigarette!

Wow, Pete! I'll testify that's a stoneless peach! Spread it like I've dented it in here—and you've uncorked an eyeful! Suppose you'll want to call me old Mr. Hammer because I hit the nail on the head!

And, bet real money that if this slogan stuff keeps me awake the rest of the night, I'll wire and offer it to R. J. Reynolds Tobacco Co. before you hit the deck! And, I'll be spending some of the proceeds for noon eats! In the "lang-wage" of Jigger-Jones of Joplin, "you tell 'em old yacht, you've got the sales spirit!"

Blowing out of St. Louis at 10.12 tomorrow with a bundle of business. Off for Ohio. Got something on me mind!

EX-TRY! EX-TRY!

Just got a wire, I sold 'em that slogan! Pete, eat on me! S.

Till I get it off—

Shorty.

Mention The American Thresherman and Farm Power

Aunt Malinda

WELL, we gave thanks unto the Lord and fed the folks right royally at Thanksgivin', if I do say so. Silas 'lowed that I was strong on this "feed and waterin' idea," when the bills came in. "Yes," I says, "but I never baked half a loaf if I had flour enough to make a whole one. You can't do the honors these days on sweetened wind; the sugar comes too high."

There's a whole lot in lookin' backwards and comparin' the highway of the past with that of the present, in retrospection, that's like turnin' the pages of your scrap book and readin' again the things which you read years ago and would 've forgotten but for this record of the past.

Folks used to go to church more on Thanksgivin' than they do now, that is, Protestants did, for the Catholic, true to his faith as the needle is to the pole, goes to church on Thanksgivin' the same, yesterday, today and forever, and therein I admire his fidelity. I was taught early in my life that we should pray as well as eat at Thanksgivin' time, but now it seems that everybody has the Lord's prayer printed and on the day appointed by the President for us to express our thanks, we simply say, "Lord, them's my sentiments!"

We're doin' too many things in a perfunctory manner in these swiftly movin' years. We could as easily attend church, on Thanksgivin', twenty or thirty miles away (most of us could), as we could two miles away forty or fifty years ago. You couldn't get inside of your "sedan-Lizzie" then and turn on the current and squeeze the gas squirter and go lickety-split twenty or thirty miles an hour. You hitched up the tired horses, that had been workin' all the year, and drove five miles an hour, or maybe you walked to church as I used to do, better'n two miles, and Silas was mighty glad to get the opportunity of walkin' back home with me and back to town again, whereas he don't want to walk ten blocks to the office now.

Lookin' back to the days when Silas walked six or seven miles to Sunday school, I sometimes think of what Puck says about human bein's—"What fools we mortals be." Of course Silas never walked that far to go to Sunday school with me, for he'd had his eye teeth cut long before he hit the trail of the lonesome pine, that led up the railroad track past Hamilton's Mill to where he usually found the "ice pitcher" filled by his prospective father-in-law and mother-in-law. He'd encountered other icebergs in the matrimonial seas some time before and had, as the threshermen says, "shortened up the eccentric" a notch or two.

Different states have different customs, just as different families make different kinds of stuffin' for their turkeys at Thanksgivin' and Christmas times. I mind how we never used anythin' exceptin' bread and sage and other season' in our dressin', but now Silas wants oyster dressin' and cranberry sauce and all that with his turkey, and then wonders why on earth we're so extravagant in our livin'. Men are such unreasonable critters!

In Indiana, where I was raised, it was unlawful to hunt on Sunday and only a few folks broke the law, while in Wisconsin Sunday is the biggest huntin' day of the week and I've heard a thousand shots fired within an hour after sunrise when the ducks come in, and nobody seems to wonder at it. You can hear the church bells of the city keepin'

chime with the roar of shotguns on Sunday when the law is out. I never could get used to it,—this breakin' of the Sabbath day in such a manner, and I never expect to. I've caught Silas fishin' on Sunday afternoons, when they were bitin' good, but he's never yet gone off huntin' and for that much, at least, let us be thankful.

Now we are again approachin' the day of all days, the one on which the Prince of Peace was born so many hundreds of years ago, when the angels sang that beautiful refrain, "Peace on earth, good will toward men," and our thoughts turn back again to the days of childhood when we looked forward with so much eagerness, rich and poor alike, wonderin' what Santa Claus would bring us on Christmas Eve. I never want to forget the blessed days of childhood, nor the days of my children's childhood, now turned into days of manhood, and ministerin' to the third generation, even as Silas and I used to minister to them in the name and in the stead of the patron saint of little children. I don't want to forget the few sticks of striped candy, with sometimes an orange, that I found beside a little naked china doll, or maybe a pair of yarn mittens, in my stockin' on Christmas mornin'. How my heart beat with gratitude for these frugal evidences of Santa's remembrance, expressed by proxy on the part of those who loved me as no other had ever done in my childhood days. How I love to linger on the memory of Christmas as it was then, when with "one knife, one fork, one spoon and one plate" we enjoyed our Christmas dinners so long before the days of napkins, finger bowls, after-dinner mints, and oyster dressin', which would 've been considered the very height of extravagance.

I was talkin' about these things to Silas t'other day and he seemed to go back again in the spirit of the past.

"Yes," he says, "and things always tasted better when we had only one plate for it all. I never go to a banquet," he says, "that I don't have to begin fiddlin' around to get my bearin's on which spoon to eat soup with and which fork to harpoon the grub with. You hear the younger generation commentin' on the older folks who eat pie with their knives," says he, "callin' 'em sword swallowers because they feed the cylinder with their knives instead of cuttin' meat with a fork, which, common sense teaches you, is just as out of place as tryin' to gather up peas on a table knife. Which is the poorest manners," says he, "havin' the peas roll off your knife or havin' your meat slip out of your plate in tryin' to saw it into bites with a table fork, while a perfectly good knife must remain idle? Lordy," says he, "how I miss them little plates we used to rest our tea-cups in after pourin' out a saucerful of hot coffee. Then you could blow off a cloud of steam and drink a good saucerful of coffee down without an interruption, whereas now you've got to take it from a teaspoon like you do medicine and pretend that you enjoy it. Malinda," says he, "the Lord never intended hot coffee to be drunk from a teaspoon; the whole system is wrong. It's like lickin' sugar water out of the spile in the tree, too slow a process for comfort or enjoyment. Why," says he, "if a person were to elevate his saucer at the table in company and drink his coffee from it, the very thing for which the saucer was originally made, or if he happened to make a little noise in

drinkin', everybody would be shocked, and if a person isn't bridlewise to all the nonsense of the modern table manners and gets the wrong sized spoon in the right dish of beans, why he's a 'rube,' and they want to put a nose-bag on him. I pity the poor devil," says he, "who gets these things mixed, for I can sympathize with him, but I just let the ill-mannered critics who used to call me down go plump. If I didn't know how I asked questions and if I got mixed on my weapons I just let them go to thunder and kept on feedin' the cylinder from both sides. It's a whole lot poorer manners," says he, "to criticise folks about what they don't know than it is to try to keep up with Lizzie' and fail because you don't know how."

"You know," Silas says, "grub never tastes as good when the bill of fare is scattered over three plates and five or six dishes as it did when it was on one plate, with one knife and fork and one religion. Why, I'm afraid to eat butter on hot apple pie just because some pot-hound who thinks he knows it all wants you to eat cheese with your pie. You'd think that cheese is the tie that binds, to hear some of 'em tell it, but for me I'll eat butter on my pie when I please."

Silas was always strong on askin' questions right where it was embarrassing, from the time he called the lady's pressed chicken "souse," right down to date. I mind the time that he got mixed up on the wine glasses at a banquet where a good Methodist sister threw a shoe over the men folks smokin' cigarettes. I was like the woman as far as good manners was concerned, but I knew it was in the game and so I played and looked pleasant. But early in the meal Silas got interested in the four glasses lined up in front of each of the six hundred plates around the tables. He nudged Ed Heath, his crony, and 'lowed that the moisture looked favorable to a heavy crop in that part of the country, and Ed just ducked his head and smiled. But Silas was bound to talk, as usual, and when he couldn't get a rise out of Ed Heath or me, he tackled the smoke-objectin' member. He 'lowed that it was a dirty Irish trick and wondered why they didn't use clay pipes and all that kind of truck, until he got her b'ilin'. Then he upset the apple cart with her when he refused to follow my lead and turn down his glasses.

"All that row of glasses? Well, I guess not," he says. "I'm fer you as far as the smoke-ordnance goes but, lady, I wouldn't insult the givers of this feast or the wine or my neighbors, nor deprive myself of such an opportunity. You just slip me your glasses, but see that they're not bottom side up when that committee of nigger waiters brings forth the irrigation hose."

Then she started to lecture Silas but he told her that it'd be bad taste on his part to refuse to participate, and she froze Silas with a look that meant daggers, but he whispered to me, "Tell her to 'So, bossie,' Malinda, she belongs to your church."

So Silas can go back in retrospect to the days of table irrigation but these are past and gone, for which let us be thankful, and as we come to the Christmas tide of good cheer let the spirit of Him whose birth we celebrate pervade and let us each strive to make some other person, less favored than ourselves, a little happier, and therein will heaven bless us abundantly.

Spring Work with **HOLT** **CATERPILLAR** TRACTORS

PEORIA-STOCKTON
REG. U.S. PAT. OFF.

RETURNS from most farm crops depend on doing certain things—plowing, discing and seeding—at just the right time.

“Caterpillar” Tractors have been chosen by the most progressive farmers everywhere because they completely meet these requirements.

Able to handle the early spring plowing *without miring*—working back over the plowed ground with the harrows and seeding machinery *without slipping*, “Caterpillar” Tractors insure the largest possible crop returns.

BECAUSE “CATERPILLAR” TRACTORS DO NOT PACK THE GROUND

Many a grain crop has been saved in a wet harvest season by the “Caterpillar” pulling the binders when neither horses or any other tractor could get into the field.

The value of the “Caterpillar” is *not only* represented in the first price paid—but it is *also found* in the low cost of operation per acre, per year—during a period of years.

Bulletin C 140 will be mailed on request.



THE HOLT MANUFACTURING COMPANY
Inc.

PEORIA, ILLINOIS

Spokane, Wash. New York Office, 50 Church St.
Factories at Stockton, Calif., and Peoria, Illinois

There is but one

CATERPILLAR

—HOLT builds it.

Greater Tractor Usefulness

What harness is to the horse, a Caswell Hitch is to the tractor

BINDER HITCHES MOWER HITCHES
CORN PICKER HITCHES
CORN BINDER HITCHES
ADJUSTABLE BELT GUIDES

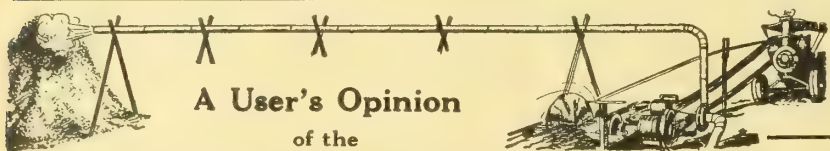
ADJUSTABLE PLOW HITCHES having
sidewise lever adjustment from the tractor
seat.

TRACTOR CON-
TROLS, or Steering
Outfits, by which the
tractor is controlled
from the seat of the
implement.

Inquiries solicited from Manufacturers, Jobbers, Dealers and Users.

CASWELL MFG. COMPANY -- CHEROKEE, IOWA

Mention The American Thresherman and Farm Power



CYCLONE SAW MILL BLOWER

after 15 years' experience

Ramey Mfg. Co., Columbus, Ohio.

Gentlemen: Please send me repair price list for your Cyclone Saw Mill Blower, as I think I will soon need a Fan Shaft and Pulley. Your Saw Dust Blower is surely a great success. I have used mine fifteen years and it is my own fault now that I need repairs. Your for business,

C. S. LONG, New English, Iowa, R. D. No. 1, Box 40.

The letter explains itself. This man's blower has worked unfailingly for 15 years without needing repairs. Surely a splendid recommendation and convincing proof of the reliability of our product. Cyclone Blowers are adjustable to portable or stationary saw mills, require very little power to operate and are easily moved and reset. If you're a saw mill man—you need a "Cyclone."

THE RAMEY COMPANY

COLUMBUS, OHIO

Mention The American Thresherman and Farm Power

DOES IT PAY

To Have Workmen's Compensation Insurance?

If you think not, read the following clippings from papers

"MAN KILLED AS BRIDGE COLLAPSES"

Cecil Cook killed last night when engine and shredder fell through fifty foot span over Big Creek.—(The Madison [Indiana] Courier.)

"LOSES HIS RIGHT ARM"

Monticello laborer victim of corn shredder accident.—(Special to Indianapolis News.)

"MAN IS CARRIED AROUND FLYWHEEL TO HIS DEATH"

Henry Vogel, age fifty, is victim of accident. Tragedy near Napoleon (Indiana).—(Special to Indianapolis News.)

"SUIT OVER BROKEN ARM"

Frank Fields (thresherman) and Albert Bragg (farmer) made joint defendants.—(Tipton [Indiana] Daily Tribune.)

"FARMER MAY BE HELD FOR BIG DAMAGES"

Members of Industrial Board hear evidence in important case Friday.—(Owen County [Indiana] Journal.)

(This thresherman had no insurance. His engineer lost his arm while threshing. The law holds the land owner and tenant liable for all damages which the thresherman is not financially able to pay.)

Similar accidents are occurring in every grain growing state in the United States of America.

These clippings tell you why thousands of employers are insuring in the Indiana Liberty Mutual Insurance Company where they receive full protection under their policy contract.

INDIANA LIBERTY MUTUAL INSURANCE COMPANY

626 OCCIDENTAL BUILDING
INDIANAPOLIS, INDIANA

The Liberty Underwriters will get you any kind of insurance you may need
Located at 625 Occidental Bui'ding, Indianapolis, Indiana

Study at Home!

Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

Organization Notes

(Continued from page 22.)

stead hard sledding and slippery going.

John R. Meyers, representing the tractor and thresher manufacturers and who were holding a convention at the same time and hotel as the National Association, assured the convention that the manufacturers were with them and considered the National Association a body of no mean consequence and deserving of the attention and aid of the manufacturers. Mr. Meyers read to the convention a resolution passed by the manufacturers to the point that the manufacturers coöperate with and give their aid to the National Association and state organization work. He also assured the Association that the manufacturers were again renewing their previous pledges of support and backing to the various state and provincial organizations of the threshing fraternity.

The Finance, Ways and Means Committee levied an assessment of five cents per capita for the year 1921, providing funds to carry on the National Association work.

A committee was appointed to recommend a uniform state button to be used by state and provincial members of the National Association for their individual members. The committee recommended the type of button now used by the Indiana Brotherhood, which recommendation was adopted by the convention; thus making that type of button the official emblem of each state and provincial organization, with the understanding that the provincial button bear the insignia of the Canadian Government.

The convention voted to instruct W. E. McCreery of Indianapolis to purchase buttons for the various states upon receipt of order for same from proper state officials.

On Thursday evening the convention was sumptuously banqueted and highly entertained by the manufacturers. The evening's entertainment, enjoyed by the delegates on a pre-convention invitation, was highly appreciated by every convention delegate.

W. H. Newsom of Elizabethtown, Indiana, was reelected president; I. N. Snook of West Point, Iowa, vice president; Clark E. Staley, LeRoy, Illinois, secretary-treasurer; J. B. Parker, Indianapolis, Indiana, publicity manager; John Ryerson, Columbus, Indiana, general counsel, the directorate remaining the same, save as follows: James Devin, Iowa, elected to take the place of Clyde Foster, and L. A. Clarke, Madison, Wisconsin, that of Hon. George Staudenmeyer.

As a token of its appreciation of Mr. Newsom's services as president of the National Association, the con-

vention presented him with a beautiful 32nd Degree Masonic watch-fob.

The convention adjourned Friday noon with the feeling that many things had been done so far for the threshermen of America, that the threshing industry is being looked upon by other industries, and by the United States Government, as being one of the most potent factors in the economical, financial and social life of agricultural America.

The only regret expressed in any way by the convention or any single delegate was that representatives of the other state members were not present.

CLARK E. STALEY,
Secretary-Treasurer.

This notice has been distributed on handbills in Vermilion County, Illinois.

ATTENTION!

To All Farmers and Threshermen
of Vermilion Co., Ill.

The requirements of the New State Law in regard to the public highways are as follows:

Illinois Motor Vehicle Law

Sec. 3. The maximum width of any vehicle and its load shall not exceed eight feet, excepting loads of loose hay, straw, corn, fodder, or other similar farm products.

Sec. 7. No tractor, traction engine or other metal tired vehicle, weighing more than four tons, including the weight of the vehicle and its load, shall drive up onto, off or over the edge of any paved public highway in this state, without protecting such edge by putting down solid planks or other suitable device to prevent such vehicle from breaking off the edges of corners of such pavement.

PENALTIES.—Violations of these acts shall be a fine not to exceed \$200.

THESE LAWS WILL BE ENFORCED

On December 2, 1920, at Decatur, Illinois, Foster Brothers, who are members of the Illinois Brotherhood of Threshermen, and who live at Armstrong, Illinois, were prosecuted under the above law.

The Illinois Brotherhood of Threshermen through its president, T. I. Davidson, Laplace, and its secretary, J. M. Boyer, Decatur, went to Danville to attend this hearing. The Illinois Brotherhood is backing this case to its limit; they sent their counsel to assist the local counsel in the defence of the case.

The county association is much excited over the prosecution that has been made under this new law; as it appeared in the courts of Danville, no threshermen in the state of Illinois will be allowed on the public highway with his clover huller, traction engine or tractor; if this law is enforced in

every county, as it is apparent they are trying to do in Vermilion County, the grain will have to remain in the field unthreshed, unshelled and unground. It is possible that every man who attempts to cross a public highway of any kind or character will be subject to arrest and fined one hundred dollars, and costs.

Every man who wishes to be a law-abiding citizen will leave his machine in the shed; for it is impossible, as the case of December 2, 1920, showed, for any man to go on the road with a machine, much less on the regular traveled highways of the state of Illinois.

The Illinois Brotherhood has been very active in assisting the local organizations in the defense of parties who are being prosecuted under an indictment for going on public highways with a traction engine weighing more than four tons.

There are four other Brotherhood threshermen in Vermilion County against whom damage suits have been brought, under this law.

Brother threshermen, wake up, as you may be next! Come to the annual convention, on March 1, 2, 3, 1921, at Peoria, Illinois.

We need you and you may need us. Cooperation is our strongest asset and this law must be amended. We can have it done, if you will help us.

We also must have a lien law, so we can collect what is due us after we have done honest work. A threshing bill deserves the same standing as a promissory note. By pulling together, we can get a proper hearing from our legislature.

T. I. DAVIDSON, *President.*

J. M. BOYER, *Secretary.*

New York Convention

The fifteenth annual convention of the New York Brotherhood of threshermen will be held in Rochester, New York, January 24, 25 and 26. The meeting will be held at the Royal Mirror Hall, 15 South Avenue, and preparations are under way for the best convention ever held. Kindly note the change of dates from the tentative dates published in November issue of The American Thresherman and Farm Power. Further details will appear in the January issue; but plan now to be with us for all three days, at the Royal Mirror Hall.

HAROLD SLOCUM,
President.

It Pays to Insure in Ohio

The editor of The American Thresherman and Farm Power received recently a picture of F. A. Rogers, Sulphur Springs, Ohio. Mr. Rogers, of the threshing firm of Treib and Rogers, was sitting on the remains of his separator, which had turned while threshing in a barn near Sulphur Springs.

The loss was \$1250. This amount

was paid promptly by the Ohio Threshermen's Mutual Insurance Association, with which it was insured. No wonder Rogers had a happy smile on his face!

Threshermen Meet Manufacturers

The National Association of Brotherhoods of Threshermen held its third annual convention at the Auditorium Hotel, Chicago, November 17, 18 and 19, 1920. Threshermen from all the states having organizations were present and the

brothers were given a fine opportunity to get a nation-wide perspective of the threshing business.

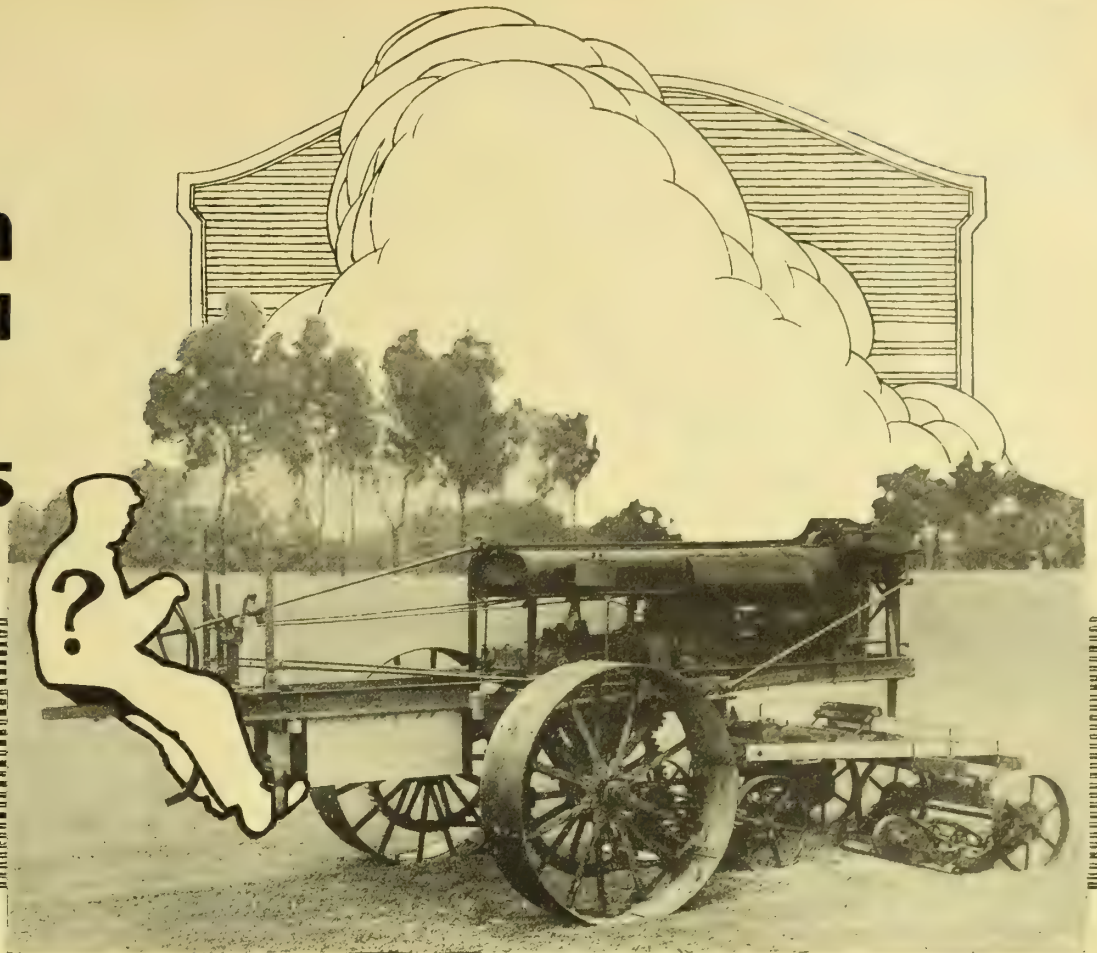
The Tractor and Thresher Department of the National Implement and Vehicle Association was in session at the Auditorium Hotel during the convention. The old-timers of the thresher manufacturing industry were glad to be hosts to the men who have been mainstays in organization work, and all met together in a banquet session on the night of November 18. B. B. Clarke was one of the speakers who showed how

threshermen's organizations have helped to stabilize both manufacturing and threshing.

Look Here, Boys!

We have engaged Lillian Tatum, a noted singer and dancer, who is booked to be at Indianapolis at convention time, and Harry Mc-Lauren, a noted Scotch singer. I have been told that he is a second Harry Lauder. We intend putting on a pageant of the different episodes of the Revolutionary, Civil, Spanish-American and World wars. We are

Can You Fill This Job



THE place at the throttle calls for training. Unless you've had that, you're not qualified to fill it.

It's all right to say that any one can run a tractor. But it takes mechanical knowledge and understanding to keep it going.

The farmer-employer knows this full well. He prefers to entrust his power machines to responsible and skilled men. He knows that it pays in the end.

For it is only reasonable that in the hands of men who know and understand, the machines will last much longer and do better work.

With a wider choice of help this year, it is certain that the farmer will fill his responsible jobs from the ranks of those who are best qualified.

Clarke School of Traction Engineering Madison, Wisconsin

START out today to qualify for a better paying job. Learn Gas Tractor Engineering. Allow us to lay before you our plan of instruction and training whereby we can make you a competent tractor expert.

The work is given by mail, during spare hours, and won't interfere with your present employment. The cost is small—the result positive.

Write and tell us that you're interested. It will cost you nothing. Better do it today.

One Man Saws 40 Cords a Day

Easily - At a Cost of 1½ Cents a Cord!

Write today for Big Special Offer and Low Direct Factory Price on Ottawa Log Saw. Strictly a one-man outfit that will Beat the Coal Shortage and make big money.

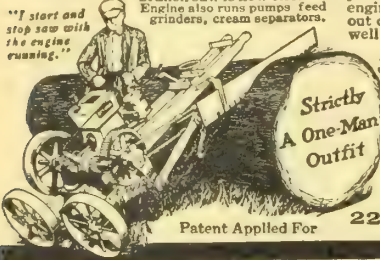
Friction Clutch You pull the lever to start saw blade, push lever to stop; engine runs on.

OTTAWA LOG SAW

Cuts Down Trees - Saws Logs By Power

Does Work of 10 to 15 Men at less than one-tenth cost. Saw makes 310 strokes a minute. Mounted on wheels. Easily moved from log to log and from cut to cut along the log by one man. No more back-breaking cross cut sawing. The Ottawa falls trees any size 9 As one-third of the tree is in the branches, a specially designed fast cutting branch saw is now offered. Engine also runs pumps, feed grinders, cream separators.

"I start and stop saw with the engine running."



Direct Gear Drives Saw

no chains to tighten; no keys; no set screws. 4-cycle Frost Proof Engine with counter-balanced crank shaft. Pulls over 4 H-P. Oscillating Magneto Ignition and Automatic Governor with Speed Regulator. Special clutch, lever controlled, enables you to stop saw without stopping engine. Simply built; nothing to get out of fix. Uses little fuel. Works well in any kind of weather and on any kind of ground.

30 Days Trial

Cash or Easy Payments Get our new special offer and find out how easy it is to own an OTTAWA and let it pay for itself as you use it. You are fully protected by 30 day trial. The OTTAWA must back our 10-year guarantee. Over 10,000 satisfied users all over the world.

FREE BOOK. Send for big 32-page book and customers' reports. Today sure. Also our low prices.

OTTAWA MANUFACTURING CO.

2212 Wood Street

Ottawa, Kansas



Patent Applied For

Mention The American Thresherman and Farm Power

Old Sile's Bargain Counter.

A FULL section of land, fifteen acres cleared, 100 acres additional can be cleared and put in cultivation with comparatively small expense. Good stream of running water, \$5,000 worth of merchantable timber, \$5,000 worth of cord-wood, besides plenty of fire-wood for future use; all fenced with woven wire and barbed wire on top; little shack and small sheep-fold on land. Entire section sloping to the south. Rich clay land, will raise anything that grows in Wisconsin; richest of pasture and dairy land, ready to care for from 100 to 500 head of stock. Located 10 miles from county seat of Taylor County, Wisconsin, on two public roads, rural free delivery, school house across from one corner of tract, gravel road more than half the way from county seat. Ready market for timber and wood.

Price, if purchased before January 1, 1921, \$25,000. After January 1st, \$30,000, \$10,000 or more cash, balance as long as desired at 6% interest. If all cash is paid at close of deal and if purchased before January 1, 1921, net price \$21,000. All cash after January 1, 1921, net price \$25,000.

The timber and wood on this tract sufficient to put up substantial buildings and clear a goodly portion of the land.

Will sell to one or more parties as a whole; they subdividing the tract to suit themselves. No trades considered, no other terms than the above on this bargain.

B. B. CLARKE - MADISON, WIS.

Mention The American Thresherman and Farm Power

sending you an electrotype of Alex Arch, the man who fired the first gun for the United States in the World war.

We will have several singers for the floor work and several high grade vaudeville stage acts, comedians, and black-face acts; there are other things too numerous to mention. Our moving picture show, from 6:00 to 8:00 P. M., will have some of the best reels that can be procured.

The floor will be cleared for dancing at 11:00 P. M. We will have a twelve-piece orchestra. We will have at this show competent ushers to see that people are seated properly; you can assure the readers of The American Thresherman and Farm Power that their comfort will be taken care of; we also will have a cafe on the main floor, serving good "eats" and plenty of soft drinks.

If we don't make this show one of the best ever, I'm going to throw up the sponge and quit.

W. E. McCREERY,
Secretary-Treasurer.

Notice for Nebraskans

The Nebraska Brotherhood of Threshermen will hold their tenth annual convention at the Lincoln Hotel, Lincoln, Nebraska, February 8, 9 and 10. Kindly advertise these dates. We will try to mail a copy of our program in time for the January issue of this magazine. Nebraska brothers should watch this column for future notices.

E. M. SAMSON,
Secretary-Treasurer.

From B. B. Himself

W. H. Newsom, president of the National Association of the Brotherhoods of Threshermen, has notified all the state brotherhoods of a proposed "Uniform Vehicle Law," which will be introduced in these several states whose legislatures convene this winter, and which is backed by a group of associations, including the American Automobile Association, the National Automobile Association, the National Highway Industry Association, and the American Association of State Highway Commissioners. Such a law would require all vehicles of whatever nature, even farm wagons, to be licensed. According to this law, no person could own or operate a tractor, traction engine, thresher, clover huller, corn shredder, corn sheller or silo filler without a license, the license fee to be based upon the weight of the machines.

In the case of tractors and traction engines, fees are based upon both their weight and power. The owner must also have a horn or other signaling device on his tractor or engine; these machines are to be run only by a licensed operator. The law would require that the owner must put lights on both sides and at

the rear of the vehicle, even though such vehicle can travel but two miles an hour.

Further facts concerning this proposed law will be published in later issues, but from this the farmers and machine owners can see what is ahead of them and govern themselves accordingly. There is going to be what the parrot told the lady—"A hell of a time"; so we may as well get busy, boys, and cut a few clubs to use on our legislators who favor any such a radical measure as this.

"OLD SILE."

Ohio's Record

The Ohio Brotherhood of Threshermen will hold its annual convention in Columbus, Ohio, at the U. C. T. Hall, January 18, 19 and 20, 1921.

It is very important to have every thresherman present. Many important sessions will come up to be discussed by threshermen, and by farmers who own tractors. If you do not know what is liable to happen to your business, you had better get your neighbors, both threshermen and tractor owners, to come with you to this convention. Aside from a very interesting business meeting you will be very delightfully entertained.

We will also be glad to explain the workings of our insurance association, which will furnish protection on your outfit against wind-storms, lightning and fire, three hundred and sixty-five days and nights in the year at one dollar for each hundred dollars' valuation.

Here are some things that the Brotherhood has done for the threshermen in the past:

Repealed the old road law, whereby the thresherman was subject to arrest any time he drove his tractor engine upon the public highway.

Defeated the ten-ton Bridge Bill.

Defeated the "seven foot-wide" separator bill.

Defeated the Licensed Engineer bill.

Defeated the Thresher Boiler Inspection law.

Succeeded in getting a law that gives the owners of a traction engine the right to drive it over the public highway the same as any other vehicle.

We have incorporated the Ohio Threshermen's Mutual Insurance Association, which has now about \$700,000 worth of insurance in force, and is writing it for you for about five dollars per hundred less than the old-line company charges.

Every office-holder in the Brotherhood and every officeholder in our insurance association is a thresherman and is interested in the thresherman's welfare. I am sending you these greetings, and I anticipate meeting you at the convention.

GEORGE DURBAN,
Secretary and Treasurer.

Study at Home! Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address **CLARKE SCHOOL OF TRACTION ENGINEERING - MADISON, WIS.**

New Use for Steam

(Continued from page 5.)

by the Bissell machine has not been determined, but it is known that fuel and labor costs combined will not exceed six dollars an acre. Of course, depreciation, insurance and interest will increase this amount considerably.

An effort to learn true land values, from Chippewa County men at the demonstration, was not entirely satisfactory. Land men and owners of both large and small tracts are inclined to place too high a value on unimproved land. Men from the foam sections of the county seemed to undervalue the sandy soil about Holcombe.

A comparison of opinions gave the writer an idea that the average uncleared land near Holcombe, at the present time, would bring thirty dollars an acre, and that the well-cleared, well-improved land would average about one hundred and twenty dollars an acre. This difference in value, ninety dollars, is not accomplished by the Bissell machine, but the hardest work is done by it; the piling and burning of the stumps will require much less labor

and expense than the work already done at an expense of, in my opinion, about ten dollars an acre. Even doubling that, to cover the piling and burning, it means that an investment of twenty dollars, which includes time or wages, will produce an increased value of ninety dollars for each acre.

The Holcombe-Cornell section, which includes land in Chippewa, Rusk and Taylor counties, produces some of the world's best potatoes. It produces them abundantly, too. Three hundred bushels to the acre is not uncommon. Oats will average about fifty bushels per acre, cucumbers for pickling and peas for canning are great small crops that sell for ready cash, while the sections just south of here seem well adapted to tobacco. And, as elsewhere in Wisconsin, the helpful Holstein is able to start grazing on the raw land and produce her first crop, not in a year, but in a week. When it comes to quick cash crops, never overlook the Holstein. With her aid, any settler in this new country can pull through until his first harvest.

Good Taste in the Land of Toys

(Continued from page 6.)

factories, many of the craftsmen work at home, with the result that their product possesses greater individuality. A large number of unique wooden toys come from the Erz Mountains in Saxony. Incidentally, it has been estimated that from January to September of last year, a total of more than ten thousand toys were sent from Europe to the United States.

Frequently one finds excellent work among these imported toys. I recently ran across some Swiss carvings for sale at a ridiculously low price. They were chiefly domestic animals, two or three inches high, carved out of soft wood and uncolored. They would be an inspiration to a boy with a new jack-knife. I also found an ingenious round wooden man who, when pulled apart in the middle, revealed his wife concealed inside. Within her ample interior was the eldest son, and so on down to the youngest baby half an inch high. The salesman said that the entire family was turned from one piece of wood and was done by Russian peasants.

The best work of the best European toy artists, however, seldom finds its way into our shops, and a real piece of toy art is a find. American manufacturers are beginning to catch the idea, and there are a few lines on the market that possess real merit. Last year a set of flat wooden animals, of graded sizes up to two

feet long, sold very largely at Christmas time.

Rather more amusing than this line, and far more artistic, are the arts-and-crafts toys. These are similar to the best foreign work referred to. They are educational, not as objects of natural history, but rather on the art side. Not that they are masterpieces of sculpture—far from it—but they are well designed and appeal to the child mind, as types of higher art do not. They have been designed by trained artists. They teach a sense of proportion, of color value, and of decorative design, and for this reason they have not escaped the notice of supervisors of high grade kindergartens. For the child with a budding talent for drawing or sculpture they prove a more effective inspiration, and aid more in early development than the work of Michael Angelo or Raphael.

As toys, children find these simple images fascinating playthings. It is needless to go into the psychology of it. Somehow, they succeed where more elaborate toys fail. They appeal to the childlike sense of humor just as Palmer Cox's brownies did. As to durability, that is more or less self-evident. There is certainly no mechanism to get out of order, and some of these toys are made in three thicknesses of wood, with the grain alternating so that they cannot split. The patterns include barnyard and menagerie animals, Mother Goose

The New Saw that makes Wood-cutting easier!



Fuel is more valuable than ever. Make money cutting wood now.

A new and improved method of grinding makes the *Simonds Radial Crescent Cross-cut Saw* cut through a log with less effort than any previous method. The blade is tapered in a line which is the curve of a great circle and the teeth are left with sharp, flush edges. The saw cuts fast—the dust is raked out clean and there is no binding.

Every farmer should own this saw and ask for it by name.

Simonds Manufacturing Company
"The Saw Makers" Established 1832
Fitchburg, Mass.
Chicago Ill.



Mention The American Thresherman and Farm Power



PREVENT FIRE

This should be the policy of every traction engine owner. It is not enough to provide yourself with fire fighting apparatus—don't let the fire start.

South Bend Spark Arresters

absolutely prevent flying sparks and will not hinder the draught of your engine. Made for either coal, wood or straw burning engines.

South Bend Wind Stacker Hoods

and Revolving Attachments for all makes and sizes of wind stackers, build your stack square, solid and durable. Successfully operated by one man alone.

WRITE US

The South Bend Spark Arrester Company, South Bend, Ind.



Mention The American Thresherman and Farm Power

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the Act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (total disability).....	\$10,000.00
Loss of eye.....	\$ 1,990.00
Loss of hand.....	\$ 2,500.00
Loss of index finger.....	\$ 650.00
Broken leg.....	\$ 200.00

Even though the law does not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us at a very reasonable rate.

Let us assume all your liability. Write us today for application blanks and full particulars.

We are in position to write your fire insurance on machinery. Write for application.

Threshermen's National Insurance Company, Ltd., Mtl.

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

Best for Every Farm Use
The Guarantee Proves It



Red Seal Dry Batteries

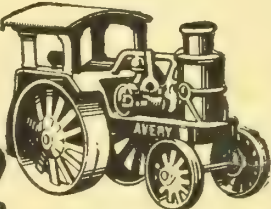
Under every condition, regardless of weather, and no matter how rough the going Red Seal Dry Batteries will keep your tractor running at par.

The Guarantee Protects YOU
 Thousands of tractor owners will use no other! Best also for farm engines, autos, door bells, hand lanterns, telephones, etc. Study the label! Insist on genuine Red Seal Dry Batteries.

Ask Your Dealer
 Under our plan, every dealer's supply of Red Seal Batteries is always fresh. Call for them by name. Ask your dealer also for our famous handbook for engine owners, free to users of Red Seal Dry Batteries.

Manhattan Electrical Supply Co., Inc.
 New York—Chicago—St. Louis—San Francisco
 Factories: Jersey City; St. Louis; Ravenna, Ohio

Get This Toy Tractor



Makes a Dandy Christmas Gift

Everybody wants one—boys and grown-ups too. Toy model of big Avery Tractor. Cast iron—beautiful red and black enamel—gold striping—rolling wheels. About 3 1/4 inches high, 4 1/2 inches long. Get your boy one for Christmas. Makes ideal table ornament too. Send 35c (50c in Canada) with names of five possible tractor, motor cultivator, motor truck or thresher buyers—and we will mail it postpaid.

EVERY CO., 334 Iowa St., Peoria, Ill.

Branch Houses, Distributors and Service Stations Covering Every State in the Union
EVERY
 Motor Farming, Threshing and Road Building Machinery



STREISSGUTH-PETRAN ENGRAVING COMPANY
 West Water & Wells Sts. Milwaukee, Wis.

STUDY AT HOME

Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

Clarke School of Traction Engineering
 Madison - - - - - Wisconsin

characters, historical and fanciful personages, all more or less conventionalized. Many of them suggest Kate Greenway's art. They are painted in flat, waterproof colors in poster effects.

Just one other kind of toy I will mention—modern building blocks. You can get ten cents' worth for the baby to set up and knock over, or you can pay a hundred dollars for a big enough and varied enough collection to satisfy the most ambitious juvenile architect.

For such a child these modern building blocks are of great educational value. He can lay out an entire country estate with them—house, garden, stable, outbuildings, and all. The possibilities are endless,

Hampshire Farmer Gives Advice

(Continued from page 8.)

zing 'round hair-pin corners and through shady lanes, that here was a farm where the tractor had proved a real success. The reasons were obvious. The tractor had been bought as a business proposition, and treated as such. It was taken care of both during operation and while idle. The latter fact is one that was contrasted vividly with the treatment doled out by American farmers. The tractor was, when not in use, stored in a shed with a cement floor, and was covered over so that dust couldn't get in. The owner believes

and they never break or get out of order.

I have not attempted in this brief paper to cover the entire subject of artistic and durable toys, but simply to suggest a type of toy for Christmas that may have escaped the notice of some of my readers hitherto, and I have tried to point out in what ways such toys are superior to the rank and file of rattle-trap inventions. Just try a few on the children, and see if they are not appreciated. Happily our tastes are tending toward greater simplicity in many things, and these simple, quaint, artistic figures—bits of real craftsmanship—will help the coming generation to a still better appreciation of what is truly tasteful and interesting in domestic art.

in not waiting for the tractor to break down before repairs are made, but overhauls it periodically. This is a very good feature as it obviates to a big extent the risk of a break-down during the peak load.

Here is the secret of Mr. Norris' tractor success: Buy the right tractor for your conditions, buy the right implements, treat them right, in and out of operation. In fact, treat the tractor as you would a horse—give it care. If you do this, you will be as strong for the tractor as this progressive Englishman.

Uncle Sam's Elk Herds

(Continued from page 6.)

steadily reduced in numbers and the winter home of the survivors was more and more narrowly restricted.

The diminishing herds were crowded farther back into the mountains. Instead of descending to the plains in winter they remained in the remote valleys and on the lower snow-swept ridges. They were thus restricted to what was naturally their spring and fall range and in some cases even what formerly would have been largely a summer range. Farther and farther the settlement advanced into the mountain regions. More and more restricted became the area on which the elk could spend the winter months, until now there is scarcely enough winter range to take care of the remaining limited numbers during the average winter season, and in severe winters the loss by starvation is extensive. In such seasons these losses would be much greater were it not for the efforts of the Federal government, the state of Wyoming, and some of the ranchers to supply field pasturage and hay to the needy herds.

"The elk situation has now reached a crisis," declares E. W. Nelson, biologist of the Department of Agriculture. "The steps already taken to provide for the remaining elk in the Yellowstone region are not adequate.

A definite program is needed, including certain radical actions, if the size of the existing herds is to be maintained. Substantial additional areas must be obtained to insure adequate winter feeding grounds, and proper safeguards instituted to reduce the losses from overshooting, predatory animals, and starvation. This is entirely practicable with the cooperation and support of the public."

For several generations the American settlers slaughtered, often needlessly, the wild life of the West. But the public is now deeply interested in conserving every wild animal that points back to the original American West. There is an increasing sentiment throughout the United States for the perpetuation of our big game and other wild life. The passing of the American wilderness, the diminution in the number of game animals, the entire disappearance of certain kinds of game and other forms of wild life from large sections of the country and the recognized inadequacy of some of the customary methods of wild-life conservation as applied to game, have impressed the public mind. It seems as though we were at the turning point and that in the near future constructive up-

building and intelligent utilization of wild life will replace the present imperfect methods.

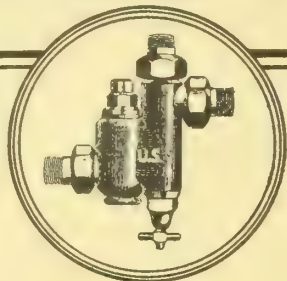
"Wild-life conservation is not a mere fad," says Professor Nelson. "The value of wild life is hard to measure in definite terms, but it is none the less real and tangible. While those most active in urging measures of conservation generally do so on the ground either of the sentimental or the sporting interest in wild life, a much wiser range of interest is involved. A region in which wild life is abundant is the richer by reason of it. The recreational values of the region are vastly enhanced. Oftimes the indirect economic value of big game, through the expenditures of those brought into a locality by its presence, make it a resource of prime importance. Interest in game conservation in these localities can be counted on, and some pecuniary sacrifices incident to game administration will be cheerfully and gladly accepted.

"The perpetuation of elk under natural conditions means that the use of elk ranges by domestic stock must be in certain parts prohibited and in other parts allowed only under careful restrictions. The elk herds of the Yellowstone region, at least up to their present numbers, have a very definite place there. They supply one of the most picturesque and valued assets of that marvelous national wonderland and their disappearance would be a deplorable loss to the nation. To demonstrate their importance would require a discussion not only of their value from the standpoint of sentiment, but of their direct value to the local public as a game supply, as well as of the influence they exert in the attraction to this region of persons seeking sport, health and recreation. Outside of Alaska and excepting the deer in certain localities, the Yellowstone elk constitute in the United States almost the last stand of big game in large numbers. Certainly the country can well afford to take the necessary steps to conserve them. They will be increasingly appreciated by the nation as one of the most valued assets of these great public recreation grounds. They will serve increasingly as a substantial asset to the state and communities within and near which they are located."

There is a movement on hand to secure several thousand acres of land now in hands of private owners, of the Yellowstone district, and convert this into a free grazing ground for the growing elk herds. Every good American will wish to see this last great American animal perpetuated, and will render his aid in securing it. At this Christmas season, it might be time well spent for every reader of this article to write a short letter to his or her congressman, urging that this vital matter be given attention.

“There is a fortune awaiting the man who can invent—”
 “Invent what?”
 “A noiseless flivver.”—*Baltimore American.*

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam tractor field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Mention The American Thresherman and Farm Power

Greetings from Minster!

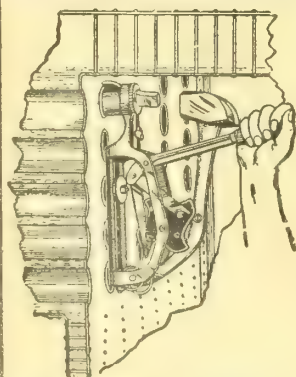
In appreciation of the splendid patronage given us during the year, we tender our thanks to all our loyal friends.

We are still in business—handling both new and rebuilt machinery, also thresher supplies—and our prices are right. Don't forget this and don't leave us out from your list of calls when in Minster.

Merry Christmas and Happy New Year to all!

J. J. Dues Machine Co. Minster, Ohio

Mention The American Thresherman and Farm Power



This view shows the Morris Beading Tool as it appears when in use in a small boiler

Repair Flues Now!

The Morris Improved Beading Tool will double the life of flues and do the work in the corner or at the side of the boiler just as well as in the middle. All straight work; no slips; no skinned knuckles. The greatest labor-saver ever put in a boiler.

A TEN-YEAR-OLD-BOY

can do as good a job as an experienced boiler maker by following the simple directions which are furnished.

Guaranteed to do better work than the old method and do it with less labor.
Write for particulars, stating size of flues.

Wallace Manufacturing Company

Westport Station

Kansas City, Mo.

Mention The American Thresherman and Farm Power

STUDY AT HOME—Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address

Clarke School of Traction Engineering - - - Madison, Wis.

Boys and Girls

The Christmas Doll

There once was a doll on a Christmas tree,
Who sighed to the angel that hung above,
"Oh, how I do wish they would keep for me
A sweet little, neat little girl to love.

"A dear little mother to curl my locks,
To rock me to sleep and to wake me up.
To dress me in cute little gowns and frocks,
And feed me with milk from her silver cup.

"A kind little mother, who'd never say
A word that was angry, nor let me fall,
Who'd always be ready to let me play
With bright little friends who should come
to call!"

And, strange though the wonderful fact may
be,
That little wax doll's little wish came true:
They picked her right off the Christmas tree,
And gave her, my dear little girl, to you!
—Ex.

Their Christmas Game

It had been such a happy, busy Christmas day for Sarah and Bobby and Sue. They had gone to grandpa's, as usual, the night before Christmas, so as to get a good early chance at the Christmas tree that grandma and grandpa always set up in the big sitting-room of the old farm house. It was an old-fashioned farm house, with a big bow-window, which made a splendid place for a Christmas tree. When the children arrived, on Christmas eve, there was always a screen placed so they could not get even a wee peep at what was behind. But on Christmas morning, after breakfast (grandmother always insisted they must wait until after breakfast) the screen was taken away and the beautiful Christmas tree, with its trimmings and presents stood revealed.

This Christmas they had all been unusually happy, for every one was well and every one was there. Beside Sarah and Bobby and Sue and their father and mother, there were Aunt Tillie and Uncle Sam and their four children, so you may know it was a jolly house-party. The tree had been examined and exclaimed over, the presents had been played with, the big Christmas dinner had been eaten and now it was mid-afternoon. Grandfather called all the children together, in the end of the sitting-room near the tree and told them he would teach them a new game to play.

First of all, they must sit down quietly and listen while he told them how to start this new game. This is what grandpa said:

"When I was a boy we used to have 'bees' of all kinds. I don't mean bees that make honey but gatherings of people to do all sorts of things. There were corn-husking bees, raising bees, when buildings were to be raised, quilting-bees when your grandmother and other women gathered to quilt. Then, too, there were bees where everybody came to the school-house and 'spelled down.' All who wanted to do so, stood up in a long line and some one pronounced words to them and they spelled, each

one being obliged to sit down when he or she mis-spelled a word.

"Now the game we are going to play this afternoon is a 'Christmas Question Bee.' All of you stand up in a row and I will ask the questions."

So the children all lined up against the wall and fairly held their breath to see what questions grandpa was going to ask. The first one was real easy. Each of them wanted to answer it, but each had to wait his turn. As tiny Sue was at the head of the line, she had the first chance. Here is the question:

"Why do we celebrate Christmas Day?"

"'Cause it is Jesus' birthday," said wee Sue, so proud that she could answer.

Then came Bobbie's turn, and grandfather looked very like a schoolteacher, as he said:

"Young man, where was Jesus born?"

At first, Bobbie caught his breath, but in just a second he answered,

"In Bethlehem, sir."

Then Sarah, who was three years older than Bobbie, got this question:

"Where is Bethlehem?"

Now it happened that Sarah had taken part in a Sunday School entertainment, just a few nights before and had learned to say a verse that had in it, "in Bethlehem of Judea." Wasn't that fortunate for Sarah? So she replied:

"In Judea."

But grandpa stuck them all, when he said,

"And where is Judea?"

So, after they all had to sit down, grandpa got the big atlas and the globe and they hunted up "Bethlehem of Judea."

By this time the children were all quiet and ready to rest a bit, so grandpa got the Bible and read them the story of Jesus' birth. If you want to see what grandpa read, find the place in the second chapter of St. Matthew's gospel.

From Our Boys and Girls

DEAR AUNT JANE:

May I join your circle? I am a little girl nine years old and in the fifth grade at school. My teacher's name is Miss Esther Kline. I like her very much. I have four sisters and five brothers. One brother takes The American Thresherman and Farm Power. I enjoy reading the Children's Page very much. I have very many pets. I have three cats named Frances, Bob-tail and Tommy, one dog named Snukom, one colt named Liberty, two calves named Half-moon and Pearl, and seven dolls named Myrtle, Lulu, Mildred, Darlene, Lucile, Helen, and

a Red Cross doll. I wrote a letter to you many months ago but it has not been in the paper so it must have got lost.

Your niece,

ESTHER RISDALL.

Grove City, Minn.

(What a lot of pets you have, Esther.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am in school just now. I am thirteen years old and am in the eighth grade. I am writing this letter as a surprise for my father and uncle. My grandfather takes The American Thresherman and Farm Power which I like to read. I enjoy reading the letters on the Children's Page. For pets I have a dog named Teddy, three cats and a pony. The cats' names are Monkey, Snowball and Flora. The

mamma do lots of things. If any of the girls will write to me I will answer their letters. I hope to see my letter in print as I have never seen one from this part of the state.

With much love to Aunt Jane, I am,

Your loving niece,

FRANCES EUGENIA STINNETT.

Evington, Va.

(What a fine family yours is. Can't you send us some pictures?—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl nine years old. My birthday is the seventh of August. My father takes The American Thresherman and Farm Power. I like to read the Children's Page. I am in the fifth grade at school. Our teacher's name is Miss Neta Atkins. We have a little dog named Mack.



Maxine Doretha Hynum.

Dorothy Jane Clarke.

The third generation—Maxine Doretha Hynum is a great-niece and Dorothy Jane the only grand-daughter of Uncle Silas and Aunt Malinda.

pony's name is Trix. I have one brother and no sisters. My brother's name is Willard. I must close because I will be taking more room than necessary.

Your niece,

FOREST KOESTER.

Oconomowoc, Wis.

(I am glad to hear from you, Forest.—AUNT JANE.)

DEAR AUNT JANE:

I am a big girl seven years old. I have a brother. He was five years old the thirteenth of March. I have two sisters. Their names are Phyllis and Marjorie. Phyllis is three years old and Marjorie is one year old. I have two dolls. Grandma made me one and Santa Claus brought me the other. My brother's name is Henry Clay. He has two balls. My daddy takes The American Thresherman and Farm Power. I just love the Children's Page. I go to school. My teacher's name is Miss Mabel Cochran. I have two miles to walk to school. For pets we have two horses and a cat. The horses' names are Noble and Frank. I help my

We also have a little Shetland pony named Bessie. I have three sisters and one brother. Their names are Fern, Ruby, Velta and Raymond. As my letter is getting long I will close.

Your friend,

VESTA VIERS KANAK.

Lebanon, Ind.

(We are glad to hear from you, Vesta.—AUNT JANE.)

DEAR AUNT JANE:

I am dropping you a few lines. My father has taken The American Thresherman and Farm Power for seventeen years. For pets I have a dog and two kittens. Their names are Ginger and Fluff. My dog's name is Jeff because he only grew to the height of one foot and stopped. My father has threshed for twenty-seven years with an Avery outfit. We have a cow and pig, too. I walk a half mile to school every morning, noon and night. We have a little patch of wheat that was the first sown in our territory. Your niece,

LEONA LINDER.

Upland, Nebr.

FROM THE **BALE** TO THE **BELT**
In the ACME Plant

Atlas

YOU buy good stock and good machinery—to get the most out of your farm.
But what about your belting? Do you select it with the same infinite care? You ought to. For it is an item of no less importance.
Good belting helps to produce a good run. It rounds out that team work which inevitably results in profit.

THE name Atlas is inseparable from good belting. For all around farm work at all seasons of the year Atlas cannot be matched.
Try Atlas Belts and see for yourself. You'll be well pleased with the service they give.

TO our friends and customers and to those who we are sure will join us next year we extend the good old wish: A very Merry Christmas!

ACME BELTING COMPANY

Manufacturers

NILES

MICHIGAN

FARM BELTS

CORD TYPE TIRES SEND NO MONEY

Built for 8000-Mile Service and backed by a real guarantee. New live rubber of the highest Standard tread; reinforced side walls. Two more layers of fabric than any standard tire. A heavy, long-wearing all season tire rebuilt throughout and guaranteed against defects of material and workmanship. The first glance will surprise and please you as much as their lasting, serviceable quality. Two styles only. Order by number.

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28 x 3 .. \$ 8.35	31 x 4 .. \$13.20	32 x 4 1/2 .. \$15.85	36 x 4 1/2 .. \$17.70
30 x 3 .. 9.25	32 x 4 .. 13.55	33 x 4 1/2 .. 16.35	33 x 5 .. 18.35
30 x 3 1/2 .. 10.35	33 x 4 .. 14.00	34 x 4 1/2 .. 17.00	35 x 5 .. 18.70
32 x 3 1/2 .. 10.95	34 x 4 .. 14.35	35 x 4 1/2 .. 17.25	37 x 5 .. 18.80

Just send your order in today and if after examination you are satisfied with their extraordinary value, pay expressman the C. O. D. Section of tire left unwrapped for your inspection.

DURABLE TIRE AND RUBBER CO., Sect. 616. 2816 Wabash Ave., Chicago

BOILER TUBES HOWARD
INDIANAPOLIS, IND.

LOOK HERE, THRESHERS!

4000 two-inch Shelby Boiler Tubes cut to your length for about one-half price. A lot of two-inch Copper Ferrules, six cents each. Two-inch Boiler Flue Rollers, \$4.00 each. Boiler Tubes and Tools our specialty. Largest stock. Lowest prices.

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Elevates—Airs—Cleans

Solves the grain handling problem, without shoveling or lifting. One man and a gasoline engine does the work of three men. Loads into wagon, box car, or bin. Cleans, polishes, scours, airs the wheat or oats, making it test higher and bringing a better price. Fan mill and elevator combined, at half the price of the usual elevator. Light, durable, will last for years. Full particulars free.

Link 4-in-1 Stacker Hood

This hood delivers the straw from the wind stacker on to the stack in such a way that it keeps better and makes better feed. It cleans out the dirt, handles all straw from any machine and builds perfect stacks.

We also manufacture the OIL-RIGHT Lubricator for threshing machines, and sell the GRAIN SAVING Wind Stackers.

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FREE **\$20**

TENOR BANJO Ukulele, Hawaiian Guitar, Violin, Mandolin, Guitar, Cornet or Banjo

Wonderful new system of teaching note music by mail. To first pupils in each locality, we give a \$20 superb Violin, Mandolin, Ukulele, Guitar, Hawaiian Guitar, Cornet, Tenor Banjo or Banjo absolutely free. Very small charge for lessons only. We guarantee success or no charge. Complete outfit free. Write now. No obligation. SLINGERLAND SCHOOL OF MUSIC, Inc. Dept. 635 CHICAGO, ILL.



Foremost Among Better Grinders

Crush and grind all the grains that grow Fine for hogs or moderately coarse for cat ile feeding.

Strength, durability and service radiate from every line of these masterful mills. Simple but effective in adjustment. A strictly high grade piece of machinery for the farmer or miller.

Well suited for use with all reliable tractors. Will stand more than rated power without fear of strain, vibration or injury to the mill of any sort.

Light Running Long Life -Extra Capacity Cone-Shaped Grinders

It pays well to investigate. 10 sizes—2 to 25 H. P. or more. Write today for FREE catalog.

The A. N. P. Bowsher Co.
South Bend, Indiana



This Grain Disinfectant Officially Endorsed

The U. S. Department of Agriculture gives unqualified endorsement to the standard seed disinfectant—

FORMALDEHYDE
The Farmer's Friend

There is no excuse for this country's great losses from grain smuts. Greatest crop yield is assured by first ridding seed grain of smuts and fungus growth by the use of Formaldehyde. Cheapest and best disinfectant also for stables, kennels, chicken houses and cellars. Formaldehyde, from our laboratories, sold by your dealer in pint bottles, each of which will treat 40 bushels of seed. Write for new book reporting the experiments of the U. S. Dep't of Agriculture in seed treatment—free on request.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

"No Hunting Allowed"

(Continued from page 9.)

the sight of those men walking across the field. They had started into my woodland. So I quit work, walked over to the fence and as they came up I asked: "Didn't you gentlemen see the signs posted along my property line?"

"Sure," said one of them, "but we don't believe in signs."

I held my temper and ordered them off. They took their own good time about leaving. Before they had crossed my line I heard them fire several shots. That night four of our turkeys failed to show up. I wouldn't have minded it so much but that was not the first time I had had to put up with that sort of thing.

The prime grievance the farmer holds against the gun bearing trespasser is not that the fellow kills a few rabbits or perhaps half a dozen quail. True enough there are many farmers who take seriously the preachments of our Department of Agriculture and experiment stations against the destruction of insect eating birds and honestly try to protect bird life on their farms. Naturally enough such farmers resent hunting on their property.

But in the majority of cases it will be found that it is what the trespasser does between shots that embitters the farmer against him. I know of one case in which two gun bearing trespassers were ordered off a farm and disappeared in the woods. A couple of hours later the woods, being very dry from a drouthy fall, were burning fiercely. It took the owner and his men and several neighbors well into the night to put out the fire. Incidentally no less than a dozen cords of wood in the rick were destroyed. That fire may have been of accidental origin, one of the hunters may have dropped a lighted match and forgotten about it. But that farmer, his hired men and his neighbors couldn't be convinced that it wasn't done out of cold spite.

In night hunting for raccoons or 'possums when the game is treed it is the custom to cut down the tree and loose the dogs the moment it hits the ground. If it's a 'coon there'll be a battle royal, if it's a 'possum just a short quick death. But there's the fallen tree. Maybe it is lying across a stream that drains the farm in which case the owner will have to haul it out. Maybe it has fallen across a fence in which case the owner will have to spend money and do a lot of work to repair the damage.

I have known cases in which a particularly game 'coon has been treed half a dozen times during the night and as many trees cut from under him before he was bagged. Often this animal will take to the

very top of the biggest tree he can find and two hunters will swing their axes for half an hour to bring it down.

A farmer's woodlot is one of the most valuable assets to his property. Every tree is worth good money. And every tree that is felled by trespassers has to be cut up and hauled out. Sometimes a 'possum will take to a standing hollow. In that case it may be the whim of the hunters to smoke him out. Ten to one they won't trouble to stamp out the fire after the job has been finished. And if the woods happen to be dry and if there's a little wind to help matters along the farmer will have to jump out of bed, call all the hands and work for hours to save his woodlot.

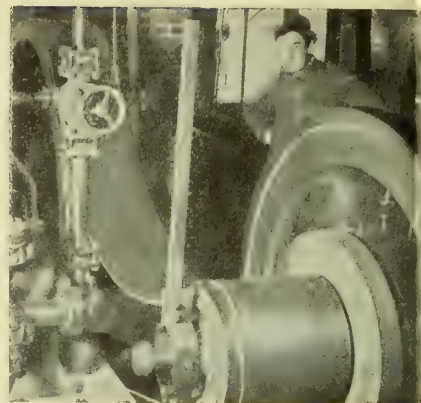
Let me make it perfectly clear that I do discriminate between gentleman hunters and the other kind. The former have not been responsible for the millions of **NO HUNTING - ALLOWED** signs posted throughout the country. But they are included under the ban simply because they seem to be greatly in the minority.

If the hunter is a true sportsman he will either turn back when he meets these signs or, breaking his gun at the breech, will look up the owner of the posted land and ask special permission to hunt on it. Under such circumstances most farmers seldom will refuse to grant this permission. All the farmer wants is some semblance of protection of his personal rights on his own property—just a little of the consideration demanded of him by city ordinances and city property owners when he drives to town with a load of wheat or other farm produce.

One of the best manuals for belt users that has been published came to the offices of The American Thresherman and Farm Power during the past month. Realizing that it contains much of value to the thresherman, we wish to call special attention to "Short Cuts."

Beginning with the different kinds of belting, their manufacture, their uses and desirability, "Short Cuts to Power Transmission" takes the reader through the entire process of selecting, ordering and installing belting. Some space is, of course, devoted to Alligator Steel belt lacing, but other methods of belt jointure are also given a fair and impartial description. Pulley sizes, belt lengths and sizes, idlers, jackshafts, speeds, tension, horse power and dozens of modern belting hints are covered carefully and fully.

It contains "short cuts" and simplified explanations that enable even an inexperienced belting man to easily understand and solve belting



C-S { Common Sense Cling-Surface

What is the use of spending good money for belt dressings that don't do your work and may not preserve your belts, when **Cling-Surface** will cost you little or no more money and *will* preserve your belts, *will* stop all slipping and let all belts run easy or slack under full loads.

Ask your dealer or write us.

Cling-Surface Co.
1070 Niagara Street
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IRRIGATE Your Field and Garden

Get larger yields and profits. Provide fire protection for your buildings, and water for your stock, by installing an

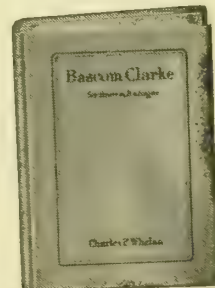
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A compact dependable, and economical pump that requires little attention. A size for every purpose—small farm or large irrigation project. Absolutely guaranteed.



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HEINEKE

PERFECTION

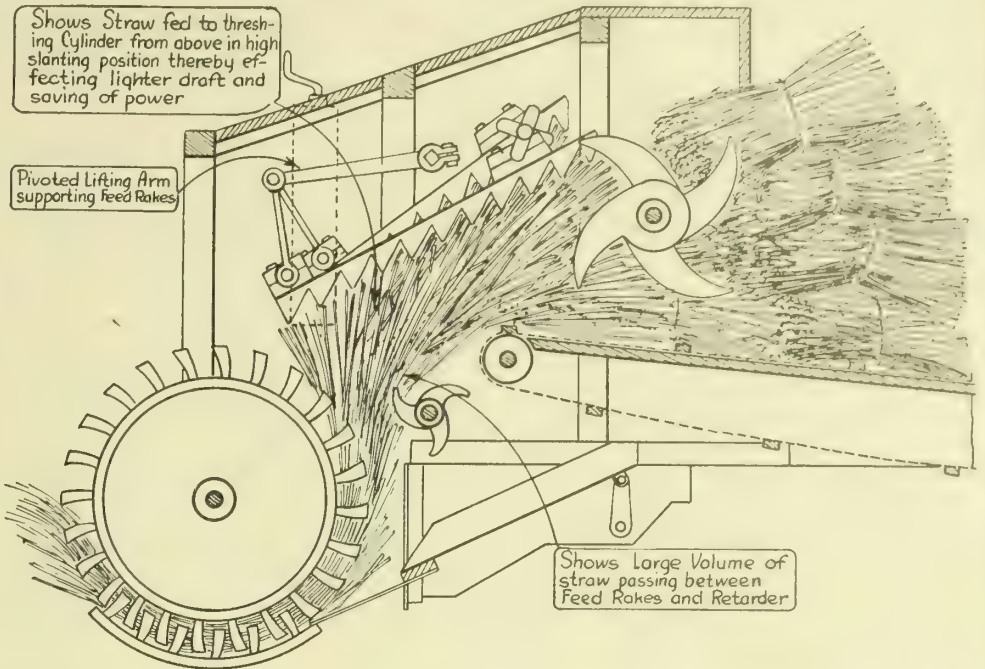
SELF FEEDER

For Service Reliability
Economy Durability

Made with rotary or crank band cutter. Regular carrier or 14-foot folding carrier, just as you want it.

The very light draft of the **Heineke Perfection Feeder** makes it indispensable where small gas tractors are used or where power is limited.

Our catalog is now ready, giving full description. Write for your copy.



HEINEKE & COMPANY
SPRINGFIELD - - ILLINOIS

Be sure to say Heineke Perfection when ordering your new Thresher.

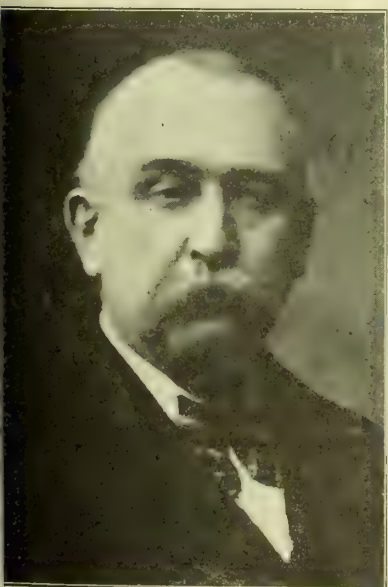
Mention The American Thresherman and Farm Power

problems that arise from day to day. Every user of belting, even if he has a technical education, will find this volume of great assistance. Complimentary copies can be obtained by writing the Flexible Steel Belting Company, 4649 Lexington Street, Chicago.

We feel sure the average farm power user will find more than enough good information to warrant the trouble of writing for this booklet.

John Wesley Alkire

On November 17, John W. Alkire, one of the faithful, passed on to the great Beyond. The initial number of The American Thresherman and Farm Power contained a sketch of Mr. Alkire's life as a machine man. For years he lived in the editor's



John Wesley Alkire.

home, helped raise his children, and as for years subscription manager of this magazine. In the fullness of time he has gone peacefully to rest and to receive his reward in the mode of the blessed.

Wiring a House for Lights

Individual electric lighting plants are being installed by the farmers in such largely increasing numbers that a book giving detailed directions for the wiring of a house for electric lights is bound to be of considerable interest to many. In most cases, perhaps, it is more wise for the farmer to hire a skilled electrician to wire his house than to attempt to do it himself but such labor is very expensive and if a farmer is mechanically inclined and knows something about electrical equipment, he can do the work himself at a fraction of the cost, providing he has detailed information available as to just how is the best way to do it. A book has just been published by the Norman W. Henley Publishing Company, New York City, New York, "House Wiring," by Thomas W. Poppe. This book contains just the information needed for successful wiring of a building. It is fully illustrated with diagrams and plans. It is bound in flexible cloth and sells for one dollar.

His Fervor Dampened

Down in southern Oklahoma, after the cotton crops are laid by, it is the custom of the colored population to hold big camp meetings. At one of these the minister was talking of the great joys of heaven. One of the brethren became very much excited and began shouting: "Praise de Lawd! Praise de Lawd! How I does wish I'se a June bug! I'd spread my wings and fly away to heaven."

At this one of the sisters sprang up and said: "Why, Bruddah Mose, one o' dem woodpeckers would be sho to git yo' on de way."—*New York Evening Post.*

Seed Planted Nineteen Years Ago Bears Fruit

Fertile seed will sooner or later take root.

As testimony that we have builded our house on firm and fertile ground, we offer in evidence the little blank published herewith.

It was one of ten thousand that was sent into the farming and threshing field in February, 1901, a little over nineteen years ago.

The little prodigal has now returned after all these years to the house of its fathers, in order that its sender may partake during the com-

ing year of the bounteous feast we have in store for him.

This cannot help but impress the thinking advertiser and the man who uses farm power equipment that as he builds for the future, he should give the utmost consideration to the magazine that sells itself.

The American Thresherman and Farm Power during 1919 renewed sixty-six and one-half per cent of its expirations, actual count, by mail; what better proof of merit can any one offer?

FORM 50 2-16-1919 M

The American Thresherman Subscription Blank.

"THE WARMEST BABY IN THE BUNCH."

PRICE 50 CENTS A YEAR

Have you read it, THE AMERICAN THRESHERMAN?
Do you need better Bridge Laws?
Do you want better Collection Laws?

If so, send us fifty cents, a money order or stamps; fill out the blank, mail to us and we will do the rest. * * *

We need your assistance to keep the magazine to which you are entitled. * * *

To THE AMERICAN THRESHERMAN,
MADISON, WISCONSIN.

Gentlemen:

Please find enclosed _____ cents for one year's subscription to The American Thresherman and _____ to the address given below.

Name _____

Town or City _____

Street _____ County _____ State _____

Date _____

Subscription to begin with the _____

SEE OTHER SIDE.

Wanted—A Press Agent for Farmers

By H. G. WEAVER, HYATT ROLLER BEARING COMPANY

THE woeful plight of the down-trodden farmer has been pointed out, explained and discussed so extensively that the condition itself has been aggravated.

You can't get an insight of country life by reading popular fiction any more than you can get a true picture of France by attending the Parisienne Follies.

If I am to believe what I read in the daily paper, there is only one type of agricultural laborer and one type of industrial worker. Here they are:

First, the farm hand—the benighted unfortunate working four-



teen hours every day and Sundays for the meager stipend of sixty-five dollars per month.

Second, the factory worker, who is on the job not to exceed six to eight hours a day for which he receives all the advantages of the city with fifty dollars per week thrown in!

According to the city press-agent, there is no such thing as a farm hand working less than fourteen hours a day, nor a city employee who works more than eight hours out of a possible twenty-four.

But listen—There are two sides to the story—The truth may be stranger than fiction but it is not so sensational.

How many farmers do you know who work fourteen hours a day consistently? Or if you're a city man, how many factories in your vicinity observe the eight hour day with a minimum wage running into two figures?

I can show you no end of shops right here in the Unionized city of Chicago where nine and ten hour days are still in style. And I know plenty of farmers—up-to-date farmers, prosperous farmers, business farmers—who don't average more than eight or nine hours per day when you figure it out on a yearly basis.

Most of the exaggerations have been in favor of urban life. The city has been advertised beyond all reason. Rural life has been clouded with pessimism.

Last week, I visited one of the sections of Chicago where several employment agencies are located. I counted two hundred sixty-eight men in line waiting for jobs—*jobs mind you—just plain, ordinary, everyday, unskilled labor, JOBS.*

I looked at the bulletin where the more attractive openings were listed. The wages ranged from three dollars and a half a day to five dollars per a day.

Do you know what board in the city will cost you?—But never mind, we'll get to that later. The main point is this: industrial laborers are not scarce—at least not in Chicago.

I talked to one of the employment agency men—He told me that within the city limits there were eighty thousand men seeking employment! I asked him what an unskilled country boy could earn. The answer was from three and a half to four dollars provided he were strong and willing to work hard.

It is a popular belief that without preliminary training the farmer boy can move to town and readily earn the wages of a skilled mechanic. This is a fallacy—the farmer lad has as much to learn before he becomes a competent factory employee as the city chap must learn before he can earn his salt as a farmer.

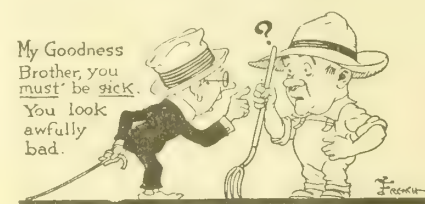
We need a better understanding between city people and farmers. The average person of the city does not realize that the farmer of today is quite a different individual from the farmer of the "sixties."

There is unquestionably a difference between the city mind and the country mind, but this difference cannot be detected by signs of hayseed or by whether or not a man secures his trousers with *galluses, suspenders, horseshoe nails or a belt!*

One of the principal points of difference between the city man and the farmer is their respective attitudes toward money.

The city man looks upon money primarily as a medium of exchange. Every move that he makes represents a cash disbursement.

With him money is the one and only measure of value. His money



buys what he needs. Nothing comes to him without it. His transactions always involve a monetary consideration.

With the farmer it is different. Much of his business is conducted without cash. Many of his transactions do not involve the use of currency at all. Money does not play an intimate part in his life. He gathers his food direct from the soil. The nature of his livelihood for the most part is the same simple process that has existed since the time that man

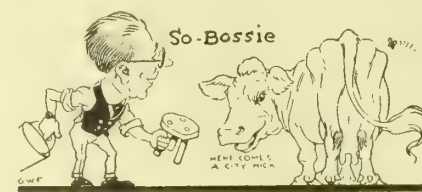
made his first appearance on earth. The farmer's transactions assume the form of barter and exchange. Those necessities that he does not raise he buys from the village general store and oftentimes effects his full settlement in bushels of wheat, bales of cotton, eggs, and produce.

Considering the large volume of business transacted by the farmer, he gets along with a surprisingly small amount of cash. He may go days or even weeks at a time without taking part in a transaction that involves the coin of the realm.

The farmer of the old school looked upon money as something to be *saved*. He abhorred a cash disbursement.

The farmer of today is influenced by the customs and traditions of the past. Contrary to popular opinion he is *not stingy*. He is perhaps the most liberal man on earth. He will give you anything that he has *except* money.

And again—the farmer's attitude towards money makes it difficult for him to understand the daily life of his urban brother. He is inclined to look upon the earnings of the city employee as unincumbered profit. When he hears of a man earning ten



dollars a day, he immediately has visions of a rapidly growing bank account. If he is a land owner, he resents such absurd liberality on the part of the industrial employer—if he is a wage hand, he begins to consider the advisability of moving to town.

Personally, I don't believe a country boy has ever moved to town without experiencing a keen disappointment—a disappointment that varies in direct proportion with his ambition to succeed and save.

The first few days he is astonished by the high prices of all the necessities of life.

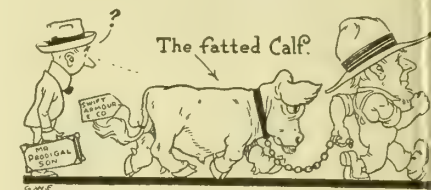
Then he discovers that the attractive salaries so picturesquely described in the magazines and movies do not actually exist in real life.

After he secures employment he is dumbfounded to find that there is just as much hard work in the city as in the country.

Having a boss standing over him all the time rather gets on his nerves and the fact that he doesn't see the sunlight more than once or twice a day serves to aggravate the condition.

A few months, or perhaps weeks,

pass by—the bright lights no longer attract. He begins to see through the veneer. He is willing to return to the farm, but usually it's too late. He will find conditions changed. He is no longer fitted for farm work. He has sacrificed his birthright for an overdose of cabaret. His place has been filled by someone else and the fatted calf sold to Swift or Armour.



There are thousands of farmer boys in the city barely breaking even. But stimulated by the excitement of the new environment or else too proud to acknowledge a mistake, they tenaciously stick it out.

From my own experience, gained through a rather checkered career, I don't believe it's possible for a young chap without training to consistently make more than five dollars per day in any city in America—*unless perchance he has the good fortune to be born into a family of the Plumbers and Pipe-Fitters Aristocracy!* But that's another story.

The farm labor shortage last fall seemed to have solved itself. The weather man favored the harvest. The crop was gathered and has been safely stored away.

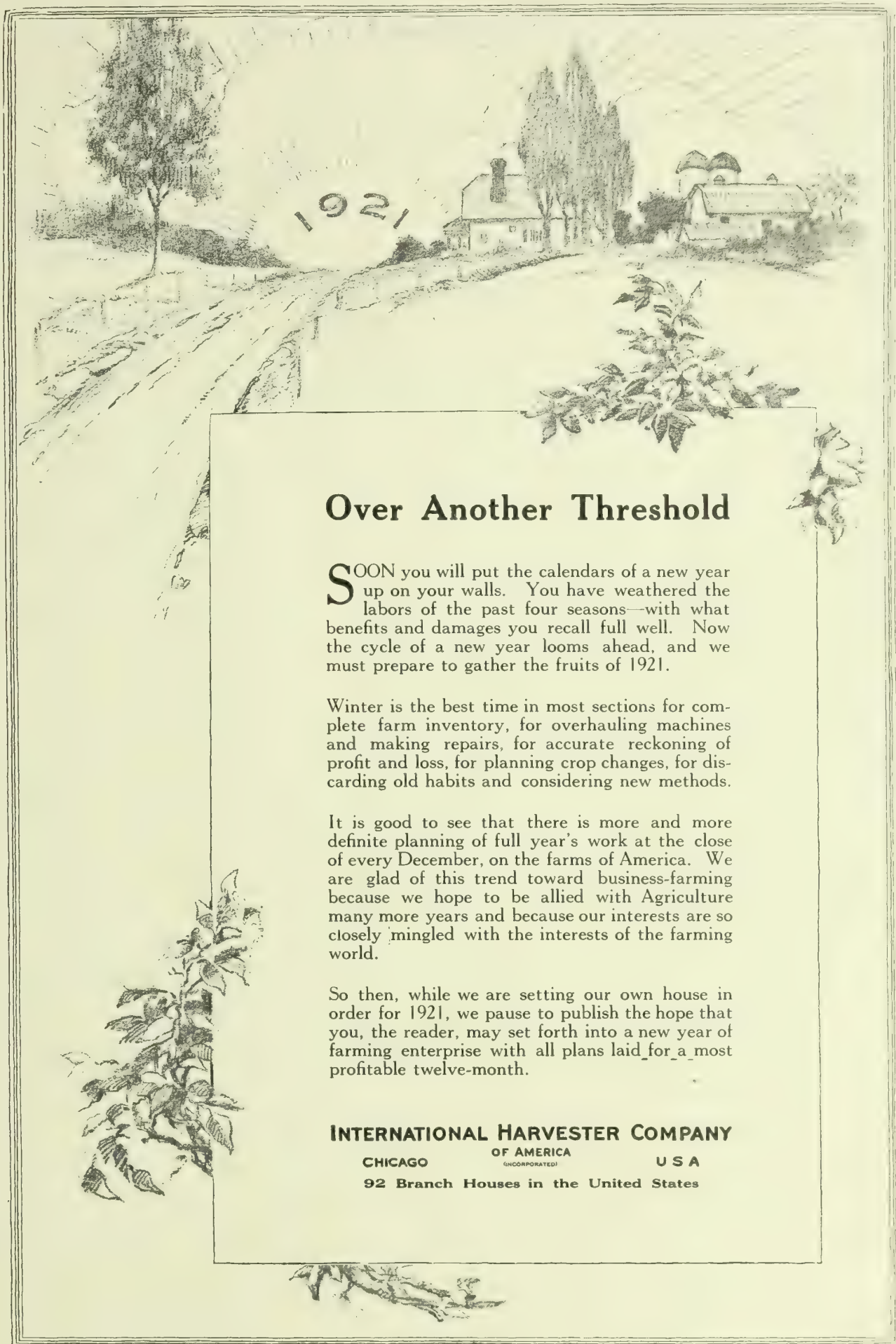
We do not yet face the bread line. The farm labor shortage is no longer acute because it is out of season but the problem has not been solved.

There is one reason and only one reason back of the boy leaving the farm, *he has reasonable hope of bettering his condition elsewhere.*

The automobile has brought the farmer boy in direct touch with metropolitan life. The barrier of distance that has heretofore separated the country from the city has been eliminated. The younger generation sees the contrast in the form of superficial attractions and the temptation is too strong to resist.

There is no spectacular side of country life. It has to do with fundamentals. The advantages of the city are on the surface—they attract the eye and temporarily intoxicate the brain. The city is always on dress parade—at least it appears to the unsophisticated country lad.

There is but one sure way to get men and women back to the farm and that is by making rural life sufficiently attractive. *Agriculture development will come only as it pays and satisfies people to live in the country!*



Over Another Threshold

SOON you will put the calendars of a new year up on your walls. You have weathered the labors of the past four seasons—with what benefits and damages you recall full well. Now the cycle of a new year looms ahead, and we must prepare to gather the fruits of 1921.

Winter is the best time in most sections for complete farm inventory, for overhauling machines and making repairs, for accurate reckoning of profit and loss, for planning crop changes, for discarding old habits and considering new methods.

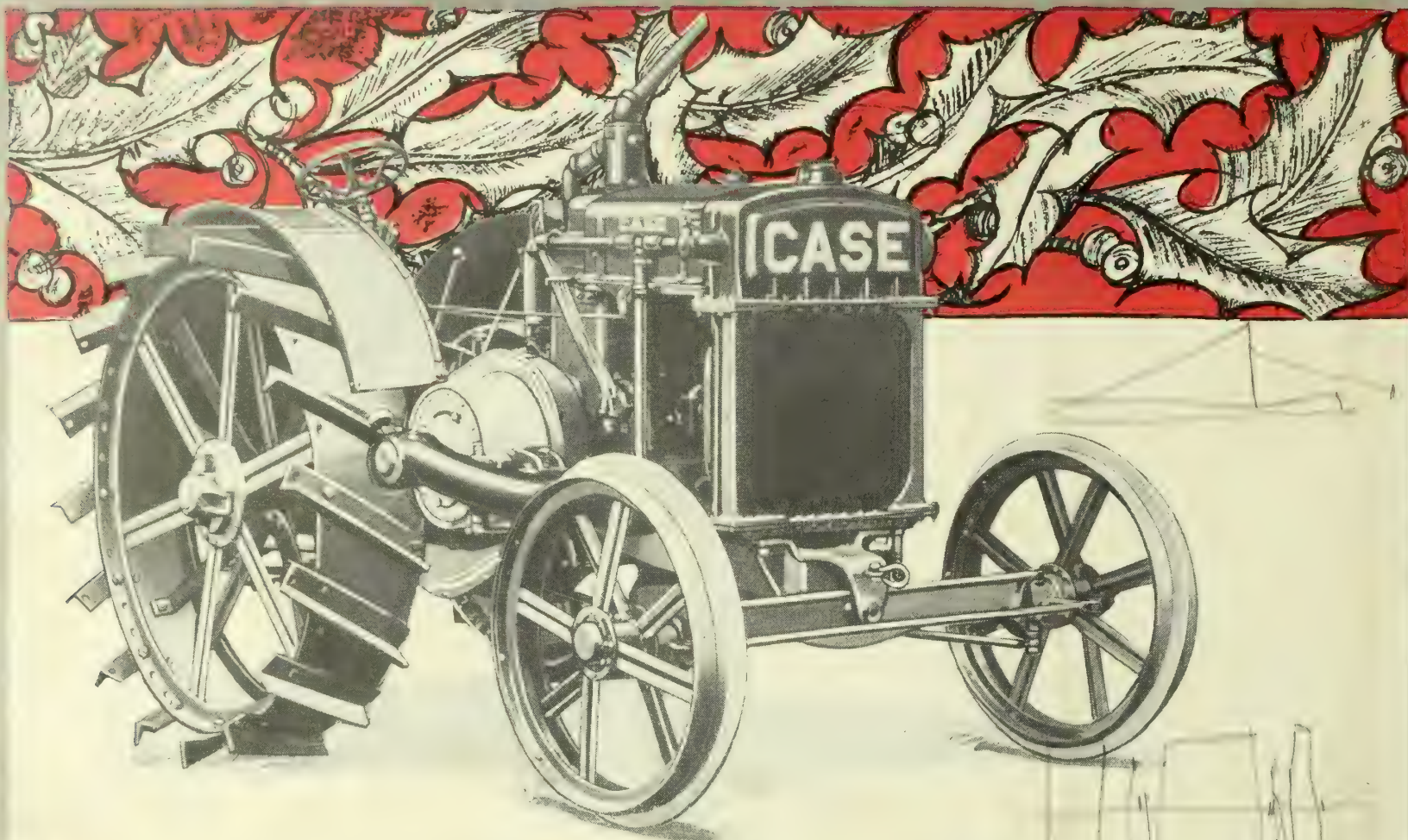
It is good to see that there is more and more definite planning of full year's work at the close of every December, on the farms of America. We are glad of this trend toward business-farming because we hope to be allied with Agriculture many more years and because our interests are so closely mingled with the interests of the farming world.

So then, while we are setting our own house in order for 1921, we pause to publish the hope that you, the reader, may set forth into a new year of farming enterprise with all plans laid for a most profitable twelve-month.

INTERNATIONAL HARVESTER COMPANY

CHICAGO OF AMERICA U S A
(INCORPORATED)

92 Branch Houses in the United States



Merry Christmas— And a Merrier One Next Year!

THE J. I. Case Threshing Machine Company extends this greeting and wish to all its friends in all the world.

Merry Christmas! And to make the next Christmas merrier, if possible, let us all try to contribute our mite toward making the world a better, happier place in which to live. There is opportunity—there always will be,—for improvement, and there are none of us who cannot help by precept or production.

Let us all pull together for betterment; for better homes and better babies and better

health; for modern conveniences and devices to lighten the labors of the wives and daughters who make our homes; for better livestock and better barns; for better soil and better crops and better facilities to produce and save those crops.

Wherever possible, let us strive to provide the farm with better equipment, and make it more attractive to the boys and girls, who will make it merrier on all the Christmas Days that are yet to come.

Again,—Merry Christmas!

J. I. CASE THRESHING MACHINE COMPANY

(INCORPORATED)

Dept. DJ-12

Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

CASE
POWER FARMING
MACHINERY



Look for the
EAGLE
Our Trade Mark

NOTE:
We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

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The AMERICAN THRESHERMAN AND FARM POWER

Madison
Wisconsin

THE THRESHERMAN

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CLARKE PUBLISHING
COMPANY



UNIVERSITY OF ILLINOIS

JANUARY 1921 VOLUME 23, No. 9
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Copyright 1920, by The Goodyear Tire & Rubber Co.

Power Farming—and Goodyear Belts

The great advantage in farming today is the use of mechanical power. Along with those other gifts of agricultural science—soil chemistry, seed selection, and crop rotation—it is the source of greater production, at lower cost, and with infinitely less drudgery.

One of the striking changes which power has brought about is in the nature of its user's problems. The farmer today, operating a variety of machines, faces problems more like those of the modern factory manager than like those his father fronted. He has to guard against waste of power, know how to utilize all of it, and know how to produce and transmit it at the least expense in money, energy and time.

Belting is so vital a factor in all of these that the question of *what belt* deserves from every progressive farmer the same careful consideration that industrial managers give it. To every such farmer, it must appear logical that the most powerful, efficient and economical belt for him is that which is accurately specified to the everyday duty he expects of it.

That is the exact basis on which Goodyear Klingtite Belts are built for farm power service. Back of their special construction, back of their very designing, in fact, is a body of close study and actual experience with all the

approved farm power machines, operating under a wide range of farming conditions.

The Goodyear Klingtite Belt is a farm belt. It needs no breaking in. It requires no belt dressing. It is proof against cold and damp. It will not shrink. It holds the pulleys, delivering full power. It has a loose, free-swinging action that favors the engine bearings. It is unstitched, and will not separate at the plies. It runs trouble free. It outlives other belts.

Remarkably good evidence that it has demonstrated these qualities may be found in the fact that sales in lineal feet of Goodyear Klingtite Belting during the period from November 1, 1919 to September 1, 1920 were 270% greater than for the corresponding period of the preceding year. For these ten months the percentage of adjustments necessary on Klingtite has been only 00.021%—a record of 99.979% satisfaction.

By this sort of service the Goodyear Klingtite Belt, like Goodyear Cord Tires for motor trucks, protects our good name and earns the universal demand it enjoys. Other information about Goodyear Belts, and a copy of the Goodyear Farm Encyclopedia, will be sent on letter request to The Goodyear Tire & Rubber Co., Akron, Ohio, or Los Angeles, California.

GOODYEAR
KLINGTITE BELTS

The AMERICAN THRESHERMAN AND FARM POWER



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Price Readjustments and Agriculture

Farmers today are sharing the national burden

IT is inevitable that present and future price readjustments should be felt by farmers as well as by all other industries. Yet men familiar with rural conditions know that decreases in income will bring many farmers dangerously close to failure. Means must be found to increase the farmer's earning power.

Greater production is one means to greater earnings. The ever-growing use of machinery shows that this fact is receiving careful thought. However, much can yet be done to lower operating costs. Particularly where machinery is used, operating costs very often eat heavily into profits.

In this connection, lubrication is the most important and often the most neglected factor. The way in which you lubricate your machinery is an important factor on whether it will have a long or short life; whether your repair bills will be large or small; whether your fuel expense will be high or low; and most important of all, whether your work will be interrupted by frequent breakdowns.

Prominent engineers agree that over 50% of all repairs on tractors, trucks and auto-

mobiles are due to incorrect lubrication. Thousands of public and private tests made by the government, agricultural colleges and manufacturers have shown that incorrect lubrication is often directly responsible for excessive fuel consumption, breakdowns and loss of power.

The Vacuum Oil Company has for years been recognized the world over as an authority on scientific lubrication. Gargoyle Mobiloils, when used as specified in our Chart of Recommendations, have in many tests, shown a saving of oil of from 50% to 70%, and a fuel economy from 17% to 25%. Gargoyle Mobiloils enable you to get more power from your engine.

The Chart of Recommendations (shown in part on this page) specifies exactly what grade of Gargoyle Mobiloils will give you best results from your automobile, truck or tractor.

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15-, 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.



Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC
BRANCHES:

New York
Boston

Philadelphia
Pittsburgh

Detroit
Chicago

Minneapolis
Indianapolis

Kansas City, Kan.
Des Moines

Chart of Recommendations for TRACTORS

(Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

- A means Gargoyle Mobiloil "A".
- B means Gargoyle Mobiloil "B".
- BB means Gargoyle Mobiloil "BB".
- Arc means Gargoyle Mobiloil Arctic.

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for all Tractors.

NAMES OF TRACTORS	1920		1919		1918		1917		1916	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Alfa-Chalmers-General Purpose	A	A	A	A	A	A	BB	B	A	A
All Work	BB	A	BB	A	BB	A	BB	B	A	A
Appleton	BB	A	BB	A	BB	A	BB	B	A	A
Aultman-Taylor (18-36)	BB	A	BB	A	BB	A	BB	B	A	A
" (22-45)	BB	A	BB	A	BB	A	BB	B	A	A
" (15-30) (Waukesha Eng)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Avery (15-10)	BB	A	BB	A	BB	A	BB	B	A	A
" Motor Cultivator & Planter	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Bates Steel Mule	BB	A	BB	A	BB	A	BB	B	A	A
Bean-Track-Pull	BB	A	BB	A	BB	A	BB	B	A	A
Big Bull	BB	A	BB	A	BB	A	BB	B	A	A
Buckeye (Findlay, Ohio)	BB	A	BB	A	BB	A	BB	B	A	A
Case (9-18)	BB	A	BB	A	BB	A	BB	B	A	A
" (10-18)	BB	A	BB	A	BB	A	BB	B	A	A
" (10-20)	BB	A	BB	A	BB	A	BB	B	A	A
" (12-25 & 20-40)	BB	A	BB	A	BB	A	BB	B	A	A
" (15-27)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Cletrac	BB	A	BB	A	BB	A	BB	B	A	A
Cleveland	BB	A	BB	A	BB	A	BB	B	A	A
Coleman	BB	A	BB	A	BB	A	BB	B	A	A
Common Sense	BB	A	BB	A	BB	A	BB	B	A	A
C. O. D.	BB	A	BB	A	BB	A	BB	B	A	A
Craig	BB	A	BB	A	BB	A	BB	B	A	A
Creeping Grip	BB	A	BB	A	BB	A	BB	B	A	A
E. B. (9-16)	BB	A	BB	A	BB	A	BB	B	A	A
" (Revere)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Flour City (20-35)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Fordson	BB	A	BB	A	BB	A	BB	B	A	A
Gas Pull	BB	A	BB	A	BB	A	BB	B	A	A
Gran Belt	BB	A	BB	A	BB	A	BB	B	A	A
Happy Farmer	BB	A	BB	A	BB	A	BB	B	A	A
Hart Parr	BB	A	BB	A	BB	A	BB	B	A	A
Header	BB	A	BB	A	BB	A	BB	B	A	A
Hescon	BB	A	BB	A	BB	A	BB	B	A	A
Hollis	BB	A	BB	A	BB	A	BB	B	A	A
Holt Caterpillar (Model 18)	BB	A	BB	A	BB	A	BB	B	A	A
" Model 45	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Huber	BB	A	BB	A	BB	A	BB	B	A	A
Illinois	BB	A	BB	A	BB	A	BB	B	A	A
Indiana	BB	A	BB	A	BB	A	BB	B	A	A
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	B	A	A
La Crosse	BB	A	BB	A	BB	A	BB	B	A	A
Liberty	BB	A	BB	A	BB	A	BB	B	A	A
Lightfoot	BB	A	BB	A	BB	A	BB	B	A	A
Manitowish	BB	A	BB	A	BB	A	BB	B	A	A
Mogal (8-16)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Monarch	BB	A	BB	A	BB	A	BB	B	A	A
Monarch	BB	A	BB	A	BB	A	BB	B	A	A
National	BB	A	BB	A	BB	A	BB	B	A	A
Nesqueh	BB	A	BB	A	BB	A	BB	B	A	A
" (10-18, 10-6)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
New Age	BB	A	BB	A	BB	A	BB	B	A	A
Nelson	BB	A	BB	A	BB	A	BB	B	A	A
Oil Pull (14-28, 16-50)	BB	A	BB	A	BB	A	BB	B	A	A
" (20-40)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Parrett	BB	A	BB	A	BB	A	BB	B	A	A
Pioneer	BB	A	BB	A	BB	A	BB	B	A	A
Royce	BB	A	BB	A	BB	A	BB	B	A	A
Rumely (12-24)	BB	A	BB	A	BB	A	BB	B	A	A
Russell (General)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Sandusky	BB	A	BB	A	BB	A	BB	B	A	A
Square Turn (15-30)	BB	A	BB	A	BB	A	BB	B	A	A
Titan	BB	A	BB	A	BB	A	BB	B	A	A
Lo-Ro	BB	A	BB	A	BB	A	BB	B	A	A
Command	BB	A	BB	A	BB	A	BB	B	A	A
Trundler	BB	A	BB	A	BB	A	BB	B	A	A
Turner-Simplicity	BB	A	BB	A	BB	A	BB	B	A	A
Union City (Model 16)	BB	A	BB	A	BB	A	BB	B	A	A
" (Model 12, 20)	BB	A	BB	A	BB	A	BB	B	A	A
" (Model 20-15)	BB	A	BB	A	BB	A	BB	B	A	A
" All Other Models	BB	A	BB	A	BB	A	BB	B	A	A
Weller	BB	A	BB	A	BB	A	BB	B	A	A
Willis	BB	A	BB	A	BB	A	BB	B	A	A
" Cub	BB	A	BB	A	BB	A	BB	B	A	A
" (Junior)	BB	A	BB	A	BB	A	BB	B	A	A
Waterbury	BB	A	BB	A	BB	A	BB	B	A	A
Wheat	BB	A	BB	A	BB	A	BB	B	A	A
Whitney	BB	A	BB	A	BB	A	BB	B	A	A
Wasson	BB	A	BB	A	BB	A	BB	B	A	A

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, JANUARY, 1921.

No. 9.

A Business-Like Combination

"Colorado" Morford and His Michigan Truck

HAULING wheat seven miles to an elevator at the rate of one hundred bushels an hour is about as fast as the average farmer and grain-buyer cares to see it move.

M. A. Morford, Greeley, Colorado, didn't move his wheat quite this fast, but he did make a remarkable record with his motor truck. Not only was speed a big factor, but the cost of transportation was extremely reasonable.

In twenty-eight hours' time, Morford moved 2,480 bushels. He lives seven miles from the elevator, and his truck has good roads across level, irrigated country on which to travel. This explains why his haulage costs were so low. Itemized, they are:

Gasoline	\$18.36
Oil	2.50
Wages (driver)	13.50
Total	\$34.36

This amount does not include interest and depreciation. These may be estimated from some figures which the Department of Agriculture has collected.

These figures show the average life of a farm truck is seven years, with a mileage of 3,820 miles each year; the average number of days operated is one hundred and seventy-three.

Assuming that the truck cost three thousand dollars, with solid rubber tires and full electrical equipment, the Morford truck would be charged with interest and depreciation on this amount proportional to whatever wear was committed on the truck while doing this work.

Morford's wheat was hauled over average good dirt roads. His loads averaged slightly in excess of the rated capacity of his two-ton truck. As he hauled 2,480 bushels in thirty-five loads, his average load was about 4,255 pounds. With a truck having the quality of Morford's this slight overload would be a negligible factor in depreciation.

In making the thirty-five trips, the truck traveled four hundred and ninety miles. On the assumption that 3,820 miles is the average distance traveled annually by farm trucks, this would indicate that Morford had taken one-eighth of a year's wear out of his truck.

Note, however, that the truck made this distance in *three working days*. It was in good shape, well driven, had plenty of oil, gas and water. The tires were in good shape. The government figures assume that the average truck makes its mileage on one hundred and seventy-three working days. The Morford truck

did its work in about one-sixtieth of this time.

The "mean" between eight and sixty is approximately twenty-two. It is safe to say Morford took only one twenty-second part of a year's wear from his truck's life, in doing this big job of grain hauling.

As the average farm truck lasts seven years, Morford can confidently expect to do seven times twenty-two such jobs, or one hundred

and fifty-four jobs of this sort. Thus, to get depreciation, we must divide three thousand dollars, the original price of the truck, by one hundred and fifty-four. This gives us less than twenty dollars. The interest to be figured for the three-day investment is a matter for mathematical geniuses who specialize in progression; for each month of each year the truck represents a different principal sum. Since two dollars will represent the interest charge for three days (at seven per cent) on this truck *when new*, we shall allow two dollars. By being liberal on this item, we can disregard insurance.

The case now stands:

Gasoline	\$18.36
Oil	2.50
Wages	13.50
Depreciation	20.00
Interest	2.00
Total	\$56.36

Morford transported his 2,480 bushels in three days at a cost of \$56.36. This cost, carried out in



Ready to "Hit It Up" for Town. Threshing Machine and Truck at Work on the Morford Ranch, Colorado.

the same proportion for his other work, will liquidate and absorb the original purchase price of the truck. Since Morford was anxious to sell his crop at once he was enabled to "get the jump" on a wheat market which began to slump in two-cent drops about the week after his money was in the bank.

Can you show our readers a better way to market grain or stock? We have lots of Missouri readers, and they are eager to be shown, as the returns from a recent questionnaire indicate. Missouri farm readers own less trucks, and want more, than those of any other state. You might take pen in hand, to convince them; certainly Friend Morford has laid his cards face up.

We know our readers will be glad to know that the spirit of the West still lives. When the pony express first started, in the early days of Wells Fargo, the eastern capitalists said it "couldn't be done in that time." These Easterners forgot that the West had been growing men to whom nothing

was impossible. The breed still lives. Morford is the sort who, born a generation earlier, would have made sure that the Frisco mail reached the Missouri River on time.

The western men, who have learned how to get things done in spite of handicaps imposed by nature and unwise legislation, deserve a lot of consideration at this time. The men who sit in an eastern office and discuss radical changes in present highway traffic regulations—such as the drastic new draft of the Proposed Uniform Vehicle Law—should try to visualize the hardships that are overcome by these sterling Westerners: Morford and his breed.



Delivering Grain in Greeley, Colorado.

The Old Thresherman Talks Business

By W. C. SMITH

"WELL, sir," said the Old Thresherman, "I see some of the boys ain't come into the organization yet and say they ain't a-going to come in. I reckon they know their own business best but daggoned if some of them don't have some funny ideas. I was over at the county seat the other day, attending a meeting, and one fellow got up and said he didn't believe in organization. He told the boys that he didn't charge as much as the rest of them because he made enough money the way it was. Somebody asked him what his operating expenses were and he told them it was none of their business. He was running his own machine to suit himself and no one had a right to butt into his affairs."

"I have heard similar statements occasionally, myself," I said. "But they are not common. You know there are some folks that just naturally resent any outside interference, as they call it. Personally, I am sure men who go off on a tangent that way don't understand the purpose of organization and, anyway, it will not make any difference in the end."

"Huh, won't it?" queried the Old Thresherman. "Listen, sonny, that fellow is running from a half to a cent and a half under us. Says his operating expenses are light because he don't have to hire any outside help. His boys do the work. Get that? He has three boys and the boys go along with the rig and the old man figures that because he don't pay them regular wages he can get along cheap and thresh for less than the rest of us. Well, now, you listen—if that man don't lose his boys inside of two years your Uncle Ezra ain't no prophet. Shucks, do you reckon them boys are a-going to work fourteen hours a day, eat dust and grease and take everybody's sass for nothing a day and be satisfied with it? Besides that, he don't carry any compensation insurance and that is worse yet. Some of these days that man will wake up boyless, now you see if I ain't right."

"I don't doubt it a bit," I said. "I don't see how a man can expect to keep his boys at home on the farm unless he treats them at least as well as he treats other hired help."

"They don't," said the Old Thresherman, shortly. "I've seen it tried too often. Tried it myself once but happened to get a little sense into my head before it was too late. Take that there compensation insurance now. I count it a privilege to be allowed to carry it. Maybe I am wrong and I know I don't think like some fellows do about it but I want insurance on my men. Look where I would a been a couple of years ago when Bob Truitt got hurt when he was working for me. It was purely accidental but I never did hate anything so bad in my life. Bob didn't have a cent to his name except his wages and hadn't been married more than six months and there he was laid up for no one could tell how long and there I was just barely making expenses; it was that wet year, you know, and the June

freeze had got my corn and I didn't have any hogs to speak of. Believe me, if it hadn't been for the insurance I was carrying on Bob along with the rest of the men I would have been up a stump. Suppose Bob had dropped off—come daggoned near it, I tell you. Why, wouldn't a man feel awful if one of his men got hurt and died or was crippled for life and he didn't have any insurance and wasn't able to take care of him himself? 'Course it is against the law in this state but some of the boys seem to prefer to take a

Anyway, it seems so to me and I ain't worrying if it hurts them a leetle.

"Were you up to the convention last winter? Heard some pretty good ones up there. Real interesting, too. Say, a fellow ought to 'tend those things. It don't cost much and blamed if you can hardly tell a bunch of threshermen from real folks when they tony up a leetle. I aim to go every year. Well, what's your hurry? Might as well stay and gas a while."

I replied that I had some work to do and must be starting it or it never would be finished.

"Never mind," said the Old Thresherman, "there will be work when you are gone and forgotten. Bet a nickel it will be there when you get back, anyway. Say, I don't often get to preaching like I did this morning, so don't be skeared to come back. Daggoned if it don't rile me, though, when a fellow gets up and says he don't believe in organization and that insurance is all a graft and he don't aim to have anything to do with either of them. It wouldn't be so bad if they didn't try to influence others and get them in bad. I don't believe, like some fellows, that we ought to boost the prices away up but we ought to get a decent wage

and besides that we ought to kinda get together and help each other out and talk things over so we can do better work. Kinda coöperate with each other and with our customers. Now, don't you think that?"

"Most assuredly," I answered. "Besides that, business men are beginning to learn that a competitor is not necessarily something to knife in the back and throw mud at. Business is learning that there is a better way and that competitors can be friends and that the man down the street is just as honorable and worthy as you are. Business isn't and never will be a one-man affair."

"Shucks," said the Old Thresherman. "That's what I've been trying to tell you all the time. Why, I reckon a lot of threshermen would laugh at you if you told them they ought to keep books and figure interest and depreciation and overhead—but say, man, if they ever start doing it I'll bet a nickel they'll be a surprised bunch. Yes, sir, it's just like I've been a-saying, business is—Why, daggone it, business is business." After these remarks I said goodbye to the Old Thresherman. During my homeward journey I pondered on his words. Here was a man who had been raised without

any education along the lines of business methods or insurance; yet his hard-won experience had taught him that these things were as necessary in threshing as they are in banking or manufacturing.

Surely, I reasoned to myself, the time is coming when every thresherman will see these things in the same light as my old friend. The benefits of mutual help are becoming yearly more apparent.

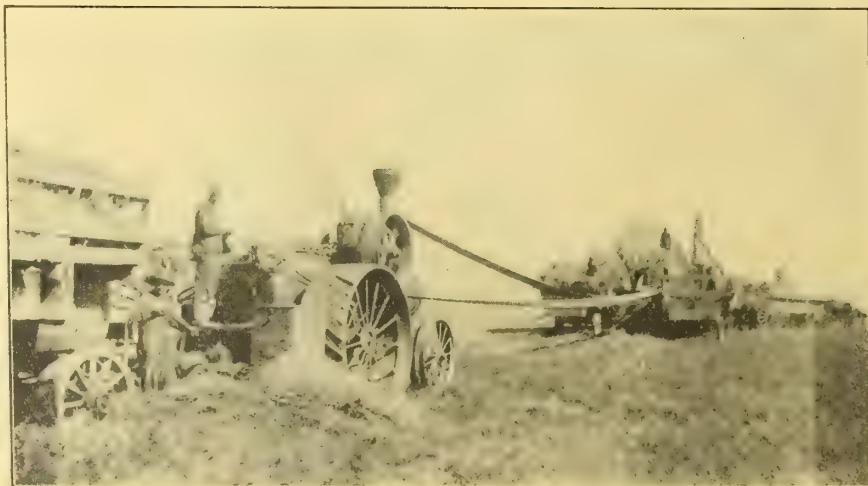
With a sigh I thought of my work. As the Old Thresherman had predicted, it was still there.



The Schmirler Brothers, Saskatchewan, Canada, Cleared \$3,760 in Twenty-Seven Days Last Year with This Rig.

chance with the law rather than take out a policy. Not me! I ain't such a wonderful law-abiding person, I reckon, but I like to be able to sleep nights without worrying about what I would do in case of accident.

"Those fellows that take a chance like that put me in mind of Wes Hardy. Wes was one of them fellows that couldn't be told anything and tried to do all of the talking himself. He was helping Henry Peterson build a barn one spring and while they were putting on the sheathing Wes crawled out on the gable end and started to saw off the



The Engineer Is Cecil G. Perry, Volt, Montana, Who Has Held This Job for Eleven Seasons. The Outfit Belongs to His Brother, S. A. Perry.

ends of some boards. He was a setting out there sawing away and Henry yelled at him. Wes thought Henry was aiming to tell him something else so he kept right on sawing and a talking and pretty soon he sawed himself off. Fell about twenty-two feet and stoved him all up. Henry said Wes wasn't no hand to talk after that and I reckon when some of these fellows that go around blowing about not carrying insurance go about long enough they are going to saw themselves off.

Threshing in Many Lands

If Your Customers Complain of Wasted Grain, Show Them This



Japanese Women Use Iron-Comb Separators.

IF the American farmer finds threshing the hardest job of the year, he can at least take comfort in the fact that he does not live in Asia or Africa or even in South America. In those countries threshing is a real task—as these pictures show. By noting carefully the back-breaking, wasteful methods followed, you may conclude that we sacrifice very little grain in this country, in spite of the great speed with which threshing is done.

Threshing in Japan is a job for the whole family. The grain, which is chiefly rice, is first hung up stalk by stalk to dry. Then it is husked by drawing it through iron teeth. Later it is polished by much pounding in a wooden mortar. The government is trying to introduce modern methods, but the farmer is the most conservative man in Japan, so the old iron-comb method of threshing still persists.

The Chinaman is equally unprogressive. "What was good enough for our fathers is good enough for us," is the motto of the Chinese farmer, and so he uses the same kind of machinery that his ancestors did a thousand years ago. But there is some reason for his conservatism. In a land where two acres will support a family of five, and where seven acres is wealth, there isn't room for a threshing machine, or for a custom man, either.

African men have for long avoided the detested task of beating the grain on smooth boards. The threshing scene of a mission farm in Africa may not look like an innovation, but it is, for the men as well as the women are



One Bundle Wagon Keeps This Chilean Crew Busy.

working, and that is entirely contrary to African tradition. In the "good old days" the whole duty of an African farmer was to let his wives support him.

In India it is customary to tramp out the grain by cattle-power instead of doing it by hand, but even that method is slow and wasteful. An American missionary who has established a model farm proved that the old method cost fifty cents to thresh a hundred bushels of grain, while with his modern machinery he could thresh the same amount for six cents. If this amount seems small, remember that food and labor are small items of expense.

The highland Indians of Chile are now almost as primitive as the Africans in spite of the fact that their ancestors had a well-developed system of agriculture. In an effort to restore the prosperity of former days, the Methodist Church has established a model farm in Chile and equipped it with American threshing machinery. A similar farm is now projected in Bolivia. Of course the English speaking dominions of Great Britain have for a long time used the same methods that we follow in this country. Aside from these countries, the United States is about a century ahead of the world in threshing methods. High-priced machines have brought low threshing costs.

(Editor's Note: These pictures were furnished through the courtesy of the Centenary Conservation Committee of the Methodist Episcopal Church.)



The Chinaman Uses This Rig.



Methodism Has Converted African Men to Threshing.



The Cattle of India Are Wasteful Threshermen.

Soil Erosion in Iowa

By M. H. HOFFMAN*

NINE out of every ten ditches in Iowa are caused by overfalls working back up through the land. The remaining one comprises two small classes, the overstocked pastures and feedlots where the constant tramping in the mud cuts up the bottom of the ditch, causing it to deepen gradually, and small side hill ditches in cultivated fields where, because it is all loose, the soil washes out to the bottom of the furrow. Water falling over a steep bank softens and loosens the soil at the bottom and permits the sides and end to fall in. If the bottom is already softened by seepage, either from a less pervious layer of soil beneath or from an overloaded tile, the rate at which the overfall cuts back is greatly increased. In studying this problem it is well to consider the geological history of the state.

According to the geologist, Iowa was three times visited by glaciers. The first of these covered practically the entire state. The second came about half way down and the last covered only the northeast quarter except for a small area in the extreme northeast corner which was not touched by any of the three and still has the topography that probably was common all over the state in pre-glacial times. The oldest or Kansan drift, where it has not been smoothed over by subsequent glacial action or covered by later deposits of wind-blown soil, has gone far in the process of valley cutting. Its river systems are well defined, the tributaries being extended in a network almost covering the south half of the state. There are a few areas of this section that still retain their flat topography. These are long narrow strips between the rivers, varying in width from a few rods to several miles and in length from ten to eighty miles. They lie in a northwest to southeast direction in south central and southeast Iowa and northeast to southwest direction in the southwest part. Erosion is gradually narrowing these strips by the lengthening and branching of the streams and ditches.

In the Wisconsin and Iowan drift areas the rivers have not deepened sufficiently to give enough fall to cause rapid extension of side branches. In addition the soil seems to hold together better so that even among the moraines where the slope is steep there are few serious cases of erosion.

Along the Mississippi and Missouri rivers bluffs of loess or windblown soil have formed, covering the old drift. The Missouri loess when not undermined will stand in vertical walls for years, but under the action of a stream of water dropping over a fall, churning and cutting at the bottom, it assumes the form of columns which rapidly drop in and melt away.

A few of these ditches are of large size, some being forty or fifty feet wide and fully that deep. Most of them carry water only during rains and the worst ones are often not those that receive the run-off from the greatest area. Just what combination of circumstances causes the formation of the largest chasms is hard to tell but the following conditions nearly always exist.

1. Formed in high valley land that is well toward the upper part of the ditch system.

2. Receiving the run-off of less than a section of land.

3. The valley rather wide and flat at the bottom and evidently old.

4. Not an excessively steep slope, but lying between steep hills.

5. The product of an overfall that progressed back up into the land becoming deeper the farther it went.



Lower Side of Earth Dam with Culvert Having Raised Inlet.

6. Neglect on the part of the land owner to check the overfall at its beginning.

The annual progress of these overfalls is from two to twenty rods, depending on the slope and rainfall. Often they are formed in several steps, one overfall following closely upon the other, each deepening the ditch. In general, the first overfall is the deepest and the rest range downward in size. The overfall progresses upstream until it reaches the point where the quantity of water is so small that the current is not able to dislodge the grass that has caught root and further progress of the ditch as a whole is impossible. Meantime, side ditches have grown out. These are in one way worse than the main one because, while the land could be farmed on both sides of the main ditch, it is now cut into small pieces, irregularly shaped and unfit for farming.



This Was Once a Bad Overfall That Threatened to Cut Up Through the Field. Now It Is Harmless. Success in Holding It Is Attributed to the Use of Brush Staked Down.

The Missouri loess soil, which ranges from fifteen to thirty feet deep along the Missouri river thins down as it extends eastward until it disappears in about the third county from the west. In the strip of land where only a few feet of this soil covers the old Kansan drift, erosion is at its worst. Here the ditches are not so wide and deep but there are so many of them and they have so many branches that they interfere greatly with

the farming operations. The trouble seems to be that in addition to a type of soil that washes easily there is the underlying Kansan that, being less pervious, turns the water soaking down from above and lessens the power of the loess soil to hold together. A flat bottom in a ditch with vertical sides is a common sight in this region. The water cuts straight down to the Kansan drift, then widens out.

In almost the entire south half of the state overfalls are to be encountered, but usually in less aggravated form. The south Iowa loess soil has somewhat greater tenacity and where it thinly covers the Kansan drift there are to be found many seeps or spouts half or two thirds of the way up the side of the hill, but the gulleys are not nearly so bad. There is, however, in this part of the state another cause of trouble in the erosion of alluvial soil in the valley land. The soil is the rich top layer washed from the hillsides and covers the valley bottom often ten or twelve feet deep. This soil is usually not very tenacious and when once started cuts back rapidly. As usual, the overfall is responsible, but the cause of its starting is often a dry weather crack that in time of the fall rains opens up a deep chasm. An instance of this kind has been reported where in a single rain such a crevice developed into a crack a foot wide and six feet deep, that extended back for fifteen rods and by later rains the same season was enlarged to eight feet in width and depth and more than thirty rods in length. Approximately eleven hundred cubic yards of soil were lost from this one ditch in a month's time. The drainage area was less than a half section and the slope averaged less than one foot in a hundred. The land was in pasture but was not overstocked. The fact that a creek at a twelve-foot lower level ran across the foot of this valley accounts for the sudden disappearance of the soil.

The remark of a landowner that he believes the places to begin to fill a ditch are at the upper end, so as to check the overfall and at the lower end so as to catch all the soil that comes down, is worthy of consideration. The checking of the progress of overfalls is not usually a difficult nor expensive matter if one is willing to inspect the work after rains and immediately repair any damage. The problem is to ease the water from the higher to the lower level in such a way that it loses its velocity at the ground line and that it does not come in contact with the raw surface of the soil. A method that has proved highly satisfactory is to set firmly one or more posts in the bottom of the ditch at the foot of the fall and about two feet from the place where the water falls over. If more than one post is necessary they should be spaced two and a half to three feet apart around the foot of the fall, their tops sloping downstream. After setting the posts, a layer of straw is tramped down on the bottom, into the corners and up against the bank. This is held in place by a layer of green brush intertwined between the posts and held down tightly against the straw by crosspieces spiked to the posts. The water comes over this in its accustomed place, but it is eased down, it cannot churn at the foot of the fall, its ground velocity is low and instead of eroding it loses some of its load in passing through.

(*Extension Professor of Agricultural Engineering, Iowa State College.)

the brush. It is a mistake to build these obstructions higher than the banks, as this turns the stream around to the sides, forming two more overfalls. This is the difficulty commonly encountered in filling the overfall ditch with straw where threshing. If the strawpile is high enough to insure that it will not rise and float away on the first flood it is so large that the stream is diverted into new channels. Furthermore, the presence of a large quantity of straw is an invitation to wild animals to make holes that lead the water through under the pile in inaccessible places and the value as an obstruction is soon lost.

Some very good results have been reported from overfalls stopped by stretching a woven wire fence across the ditch six or eight feet below the fall and filling the place with bundles of cornstalks set on end and packed tight.

There are a few cases among the bluffs along the Mississippi and Missouri rivers where by reason of the steep fall of the valley and of the hillsides that drain into it, it is better to ease the water from the higher to the lower level through chutes built of heavy plank, concrete or masonry, but the principle remains the same. It is the overfall that causes nine-tenths of the damage from ditch erosion in Iowa and it is there that any control measures should start.

After checking the overfall the problem of next importance is to raise the bottom of the ditch to such a level that it can be crossed by a team and implements. It is not always possible nor is it even desirable to leave no depression at all, for since there is a natural watercourse at this place it is much better to leave a shallow, rounded channel so that the tendency of the water to cut new gulleys will be minimized.

In all types of soil represented in our state it is desirable, and in all but the Missouri loess it is essential, to tile-drain the bottom of the ditch. This is rightly considered the first and most important step in filling a ditch, for where water flows constantly or even for a considerable time after rains it is impossible to get root growth established firmly enough to hold the soil already in place and to catch that being carried by the water. A rough straight-sided ditch in Clarke County was tile-drained. Grass caught root where it had been unable to do so before and in eight years' time the ditch had filled from five to seven feet, could be crossed anywhere with any farm implement, and presented the aspect of a flat valley.

Tile, to be most effective, should be placed below the bottom of the ditch, not alongside it, and following the general course but smoothing out the sharp turns. To lay tile one and one-half to two feet below the ditch bottom is subject to a considerable risk of its being washed out by a heavy rain coming before the fill has had a chance to be compacted. To prevent this it is advisable to drive crossed stakes beside the tile before filling the ditch, and throw in a small quantity of straw just above. The stakes form an X against which the straw is packed. A series of these, spaced from one to several rods apart will be found very effective in preventing a washout.

After the tile line is well established, low obstructions should be built in the ditch bottom. For Iowa conditions, the most successful have been those from one to two feet high and spaced at intervals of from two to six rods. These obstructions are easily and quickly made and refuse materials may be used in their construction. The brush obstruction is the most common. It is made by setting several old posts in the bed of the ditch.

These are arranged in the form of a V with the vertex downstream. A layer of straw is packed on the bottom and against the sides and is covered and held down by brush laid with butts upstream. The brush is kept from rising and floating away by cross-pieces nailed to the posts. The obstruction takes the shape of the ditch, that is, higher on the sides than in the middle, thus keeping the current in midstream in times of high water. Its duty is to hold a fill of a foot or eighteen inches and when this is accomplished new obstructions should be placed half way between the old and so on up. To build the obstructions too high to start with is to invite failure, as too much water is impounded and the danger of undercutting and side cutting is greatly increased.

Many failures have resulted from the old time method of throwing in a continuous line of brush, covering it with straw, and plowing in soil on top. This causes an inaccessible underground channel to develop, and as soon as the brush is somewhat rotten the whole fill goes out leaving the ditch much worse than before. The use of alternate piles staked down causes solid fill to form between each pile.

When brush is not available for this purpose old woven wire will be found of great value. Old posts are set as described above and several layers of hog fence fastened to them. A small quantity of straw against the wire completes the obstruction. When one realizes what a nuisance it is to dig out an old wire fence half covered by a fill of trash and earth one can readily see what a help an obstruction of this kind is when put in the right place.

One of the oldest known methods of preventing erosion is the use of willows. It has, however, not given very good satisfaction. The clogging of tile lines by the roots is an objection sufficient to condemn it, for a tile line is nearly always necessary in such a place. Second, the willow is easily sidestepped by a stream, and, third, it is unsightly and advertises a worse ditch than really exists. Very few willows are now being planted for this purpose, and those mostly in clumps across the ditch instead of in a line along it. For preventing the widening of creeks and rivers the willow has made a name for itself but this does not cover its use in preventing the deepening of ditches or in filling them. In the soil areas hardest to hold we have seen ditches filled by brush obstructions staked down that twelve years ago would hide a man on horseback. Today they can be crossed anywhere with the farm implements, and it was not necessary to use willows.

The use of solid dams of plank, concrete or masonry, has been uniformly unsuccessful. The reason for the failure of most of them is that the current sweeping to one side washes out an end and so gets underneath. Seven out of every eight concrete or masonry dams that we have observed have failed, most of them for the reason given. A few have been undercut from the holes of crawfish or of animals and some have broken because



Willows Planted in Clumps Across the Valley Are More Effective Than in a Row Along It.

not strongly made. If a dam is built with a footing several feet below the bottom of the ditch, with its ends well out into the banks, with the middle considerably lower than the ends and with a downstream curvature of about one hundred and twenty degrees of arc we believe it would stand in nine cases out of ten that now are failures.

A concrete dam placed against the wings of a concrete culvert, or, when it is built as a unit, a culvert with a boxed inlet, has proved very satisfactory. The Iowa Highway Commission has a design suited to places where the culvert must be low to take the tile water and where if it is placed low destructive erosion will result unless flood water is held back.

In placing dams against culverts not built with the drop inlet, several precautions should be observed.

1. Since it is placed in the public highway it should meet with the approval of the county engineer and the supervisors.

2. The space between the dam and culvert should be enough larger than the cross section of the culvert to insure that the flow will not be diminished during high water.

3. The space between the dam and culvert should be floored with concrete to prevent undermining.

4. Drain lines should be collected into a tile of large size that runs through the dam on a level with the floor of the culvert. This tile should be covered with gravel or crushed rock for the last rod or two so that water not passing over the dam will be drained away and not allowed to soften the road foundation.

The work just described is similar in operation to the earth dam with raised inlet, commonly known as the Adams dam. This was described in detail by Professor Lehmann two years ago and needs no further explanation. They have been used with success in Iowa but are open to the criticism that unless the large tile is carried to the mouth of the ditch or to the end of one's farm, the part of the ditch below the dam must be kept open. They are better adapted to ditches leading from long low slopes than from short steep ones. Our experience has lead us to believe that it is not advisable to install them unless the dam is built two feet higher than the sides of the banks so that flood water will go around and not over. A dike should also be extended two rods downstream from each end to prevent the ends from being cut out.

Sheet washing on hillsides has carried away large quantities of soil but except for the bluff land along the rivers it is a question whether the use of terraces is advisable. Contour farming is practised to a slight extent but most of the farmers find it more convenient to hold as much of the soil as they can by keeping it well supplied with humus than to farm on the contour. We believe the time is about here when they will do both.

The little hillside ditches that receive the runoff of only three or four acres sometimes cause con-

The Crosscut Saw

By T. A. CARROLL

I WONDER how many of us have stopped to consider the wonderful story of the crosscut saw. It has come down to us from the early ages, and it may prove of great interest to those who have occasion to use one of the modern "segment ground" crosscut saws of the present day in the timber or on the wood lot.

The first "crosscut saw," according to some writers, was the jaw bone of a huge serpent. This discovery was made by a man known as Talus, who has been mentioned by the Greeks in mythology. That was during the age of Myth and Mystery.

This man Talus was of an intente turn of mind. After proving to himself that the teeth in the serpent's jaw bone would actually "bite" their way through a limb or small sapling, he set about to improve upon his big idea, and after experimenting with a larger "saw"—the jagged section of the back bone of a big fish,—he con-



Fig. 1. 'Daedalus' Seeks to Kill Talus.

vinced himself that he had the goods, so to speak, for the patent rights on a real saw; so he immediately made preparations to shape up a saw made of metal; and whether this metal saw was copper or iron we do not know.

At any rate, Talus made progress. He showed such promise that his sister placed him under Daedalus. Daedalus was married to the sister of Talus, hence they were brother-in-laws. Daedalus, was a very learned man in the ancient Grecian period and it was quite an honor to study under him. However, he had a jealous disposition and did not like to see his young relative gaining so much fame, so he made up his mind to put him out of the way. The first picture on this page shows Talus with his crosscut saw, the first one made of metal; and in the background is Daedalus, who is trying to steal close to kill the inventor.

It is fitting to say that this statement of the crosscut saw's evolution should mention the prehistoric man's knowledge of a saw. Legend has it that the cave men in the stone age used the under-side of an ox's jaw bone as a saw. It was sharp and I imagine that if plenty of muscle was used by the cave men they could "hack" or "chew" through



Fig. 2. The Jointer Holds the File.

a log with the jaw bone. These cave men, our ancestors, improved upon the idea until one, more intelligent than the rest, made a "saw" from flint chips imbedded in the groove of a stick, cemented with tree gum and clay. I am of the opinion that if one had a cord of wood to cut with the saws of the cave men or, later on, with the saws of Talus,

the prevailing prices for cutting cordwood would not interest the boys of the present day.

So much for the first crosscut saws. Now we are living in a different age: an age of industrial development; and I want to say that the most essential feature in the manufacture of a crosscut saw is the material used in the blade. Crosscut saw steel must be hard, so as to prevent the teeth from bending or dulling easily, and so they may hold their set. It must be tough to withstand hard knots and nails and, on the other hand, it must file and set readily to save the filer unnecessary time in refitting; and not brittle, else the teeth and points will break off in use or refitting. The steel which measures up to these conditions in the highest degree is best adapted for crosscut saws.

A great deal depends upon how a crosscut saw is ground in order to make it a success. Saws that are ground on the segment of a circle (as Fig.



Fig. 3.

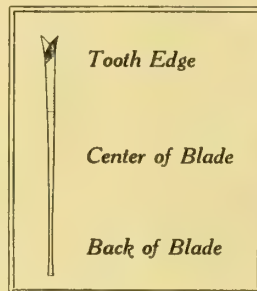


Fig. 4.

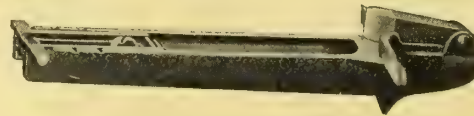
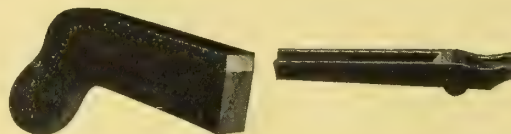


Fig. 6.

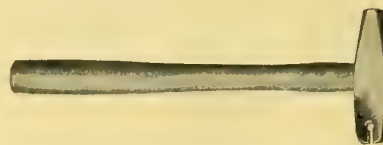


Fig. 7.

4 will make clear) are the easiest running and best adapted for all kinds of crosscutting, in either green or dry logs. Segment grinding consists of grinding the blade even on the tooth edge, and from that point on the segment of a circle gradually narrowing down to the center and back edge.

We now come to one of the most necessary things in connection with a crosscut saw—the filing and setting. Many a man has wondered if he could keep his new saw as sharp and shiny as it was the day he brought it home from the hardware store. There is no trade secret involved in fitting these saws—but the owner must have the proper tools.

The tools and gauges required for setting and sharpening crosscut saws are listed herewith. Every saw owner should possess these.

One combined jointer and raker gauge; one setting block; one setting gauge; one setting ham-

(Continued on page 54.)

The First Show in Seven Years

A Review of England's Farm Trucking

By W. J. BLACKMUR

IT is now some seven years since the last Commercial Show was held in England. I wrote an article about it for The American Thresherman and Farm Power telling of the various good points of the different vehicles, and mentioning those which were defective and which should be avoided in American car construction. Since that time tremendous events have happened. The world has passed through a baptism of fire. The war has put us to the test in a way which we hope will not occur again.

Perhaps more than anything else, the commercial car was tried by the war. Many types of cars had been designed and made; in that grim struggle, their material and their construction was put to the supreme test. Some stood it well, others were buried in the shell and mine holes, in Flander's mud and mire.

One of my nephews was one of the first to land in France for the great struggle. He had charge of a motor lorry, as we call a truck. It had been taken from the London streets, where it had plied as an omnibus. The top had been taken off, and a body put on, then it was used for running troops up to the firing line, or as close as it could get at that time. My nephew told me that it ran ex-

ceedingly well, not requiring a "spanner" till the Mons disaster; then he set it alight to prevent it falling into the hands of the Germans.

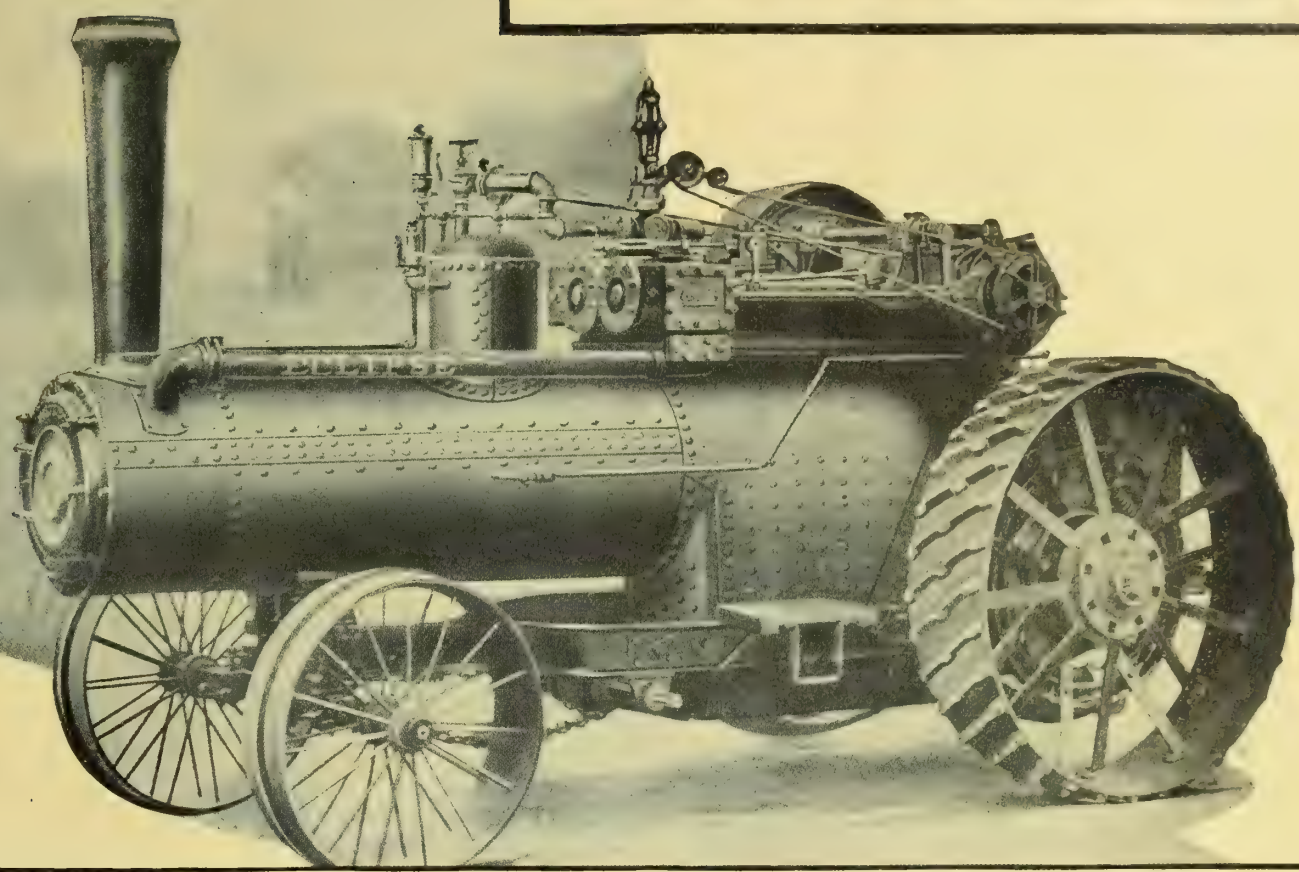
At first our cars were on good French roads; as bombs and shells wrecked the roads, the cars had to stand unthought-of strains and the wrecks became object lessons of what to avoid when designing new commercial cars.

The makers of the new cars have not been idle. Those shown at the Commercial Show were the result of careful study of what had wrecked the vehicles in the war, with a few ventures in new engine designs added.

Looking at the show, I was not impressed at any great advance made in truck design during the last ten years. Close to my own home, which is near a main highway leading to a large farming and market-gardening country, the difference is more marked. An old coffee house is on the main road, within a stone's throw of my house. It used to be the meeting place for the men driving wagons to the London markets. At eleven on Friday night, outside the coffee house and inside the large yard attached to it, one saw large country wagons loaded with cabbages, celery,

(Continued on page 42.)

FRICK



Sixty-Seven Years of Good Work

What would you say of a manufacturer who stayed in the farm machinery business sixty-seven years? That both he and his products were a success, of course.

The test of time—the ability to outlive years and years of competition is in itself proof of success—of satisfied customers—of work well done.

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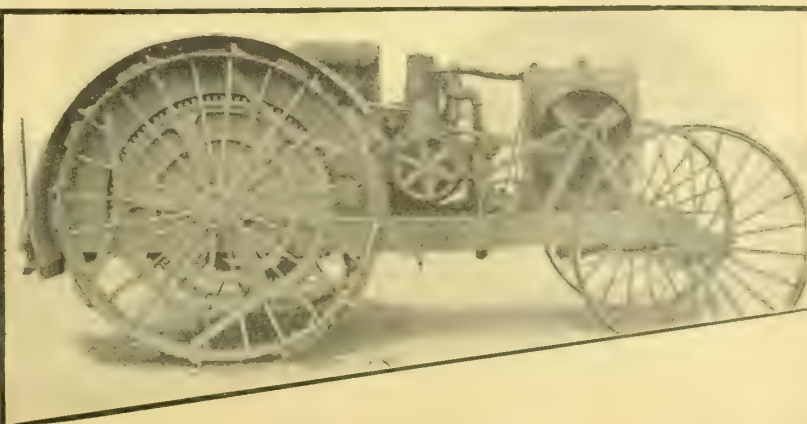
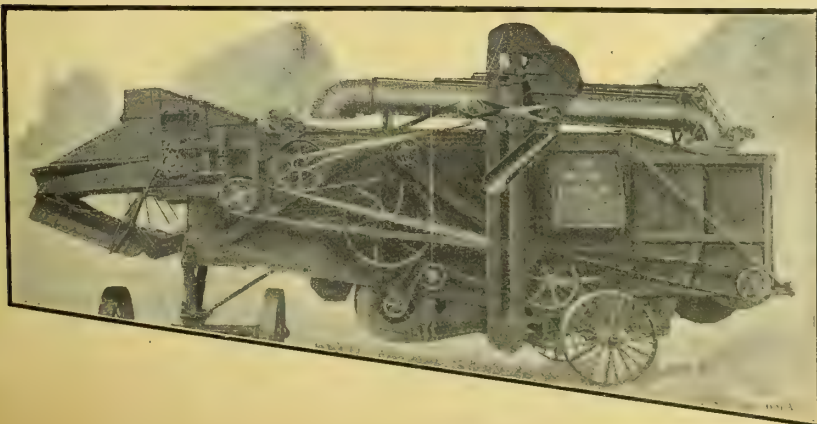
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Bookkeeping for Threshermen

BY TIMOTHY PARSON

MOST farmers in my part of Nebraska are dissatisfied with the price of wheat and are holding it in the hope that markets will advance before they must sell. In holding it, they are justified; for it certainly cost more to produce wheat in 1920 than present prices amount to. That is to say, the farmers *think* it cost more; but not many of them know exactly what it cost to grow the 1920 crop. From the talk of my neighbors, I have an idea lots of them will know what it costs them to produce each bushel of wheat in 1921.

This matter set me to thinking. Along with being a wheat grower, I am a custom thresherman. I try to keep my two businesses, wheat growing and threshing, entirely separate. As a wheat grower, I want to get my threshing done as cheap as possible. As a thresherman, I have to get enough from the wheat growers to pay me for my machinery, labor and upkeep.

If the farmers are beginning to check over what it costs them to grow wheat, it's a cinch they are not going to overlook threshing prices. There are always a few customers, in every county, who grouch about the high cost of threshing. I have a hunch that by the summer of 1921 a whole lot of farmers will have an idea they can do their threshing cheaper, by buying a small rig, than by having me do it. Unless I can show them what it costs me, —or anybody else,—to thresh grain, I had better not waste time trying to make out a decent run for the season.

I am not getting rich from the eight cents a bushel I have received in the past. In fact, I'm in a position to show any real business-like farmer that he made money last year when he had me thresh at that price. The present price of wheat doesn't affect this matter. No man can forecast, at the time he makes a threshing contract, what the price of wheat will be when the grain is ready to move to market. So the wheat grower is in the same boat with the thresherman. He must figure threshing as a business proposition aside from the wheat itself, and he should get it done where he can get the cheapest combination of price and quality of work.

Right here is where I am able to produce the goods. Last year, our county agent outlined for me a system of threshing records that I have followed for a year. While I am changing it somewhat now, I have a record of what things cost, and I'm in shape to show any loud-mouthed farmer that he doesn't know what he is talking about when he says he can thresh for two cents less a bushel than I can: at least, he can't do it and break even. Of course I can't keep anyone from becoming a philanthropist, not even several local custom men who seem to want to donate their services and one cent a bushel.

Much of our misunderstanding between farmers and threshermen, in the past, is due to the fact that farmers didn't understand how much overhead the threshermen must stand; and, on the other hand, the threshermen were not prepared to make an intelligent statement of their true expenses. I blame the threshermen almost more than the farmers. Some custom men in my county show an almost childish pride in trying to represent that they can do more threshing, in a given length of time, than is possible under present conditions. This makes the farmers over-estimate threshing profits.

I am not going to give, in this short article, a list of my accounts and how I keep them. In the past I have lumped my Machinery Depreciation, Interest, Insurance, and Repair accounts. I intend to have each of these as separate accounts for 1921, for I have found that a man wastes lots more time in separating these items, than it would take to enter them separately. It is enough for me to say that these items cost me over eight-hundred each year, and that before I ever pull out for the first job I am that much in the hole.

What I want to make clear, about bookkeeping for threshermen, is that *all* the expenses do *not* come between July 10 and October 20 (the outside limits for shock and stack threshing in my county). During 1920 I kept close track of my time, charging my threshing business for the same price I would have paid a home-grown mechanic or a separator man. I also kept close tab on my repair parts, and you would be surprised to see what it all amounts to.

Since learning how easy it is to keep a small ledger, I am keeping one that is just as easy for a bookkeeper to understand as the ledgers that are kept by our local merchants. I use another system for my farm records. Next year I shall use the account book which our College of Agriculture at Lincoln furnishes for twenty-five cents to any farmer. But as I pointed out, this threshing business must be separated from my general farm accounts.

I have an 18 horse power steam engine which I keep only for my threshing. This engine and my 32x54 separator I valued original at four thousand dollars allowing ten percent depreciation each year. In January, 1920, I valued the outfit at twenty-four hundred dollars, as I had used the rig for four seasons. Some men are not justified in putting depreciation as low as ten percent.

Here is my statement for 1920 business:

Value of rig, January, 1920.....	\$2,400.00
Interest at 6 %.....	144.00
My labor and repair parts prior to July 1, 1920.....	122.75
Since then to December 1, 1920.....	348.40
(These amounts include oil, coal between jobs, and paint.)...	
Separator man, water hauler and team, 31 days at \$16.00....	496.00
All insurance and taxes.....	112.31

Total investment and expense.....	\$3,623.46
-----------------------------------	------------

Here is my income and inventory:

Value of rig, December, 1920.....	\$2,000.00
For threshing wheat.....	1,539.20
" " oats.....	415.64
" " barley, rye, etc.....	204.40

Total receipts.....	\$4,159.24
---------------------	------------

As you see by these figures, I have made something over five hundred dollars profit for the 1920 season, and this is real profit, for I counted in my own wages as expenses, along with repair parts and oil. Also, my depreciation is taken care of.

Some men might hesitate to let their customers know these facts. I feel no such reticence. If any farmer, in common with two or three neighbors, thinks he can take care of this overhead of depreciation and repairs at less expense than my thirty customers do at present, I can show him what expenses he will be sure to meet. On this basis, three farmers with a 20x28 separator, or five with a 26x46, cannot compete with my big steam rig. The amounts that I charge the outfit for early season overhauling and repairs are the cheapest labor that can be bought. One day of repairs when the crew is assembled, and a bunch of farmers with teams and bundle-wagons are lying idle, cost *both* of us—the farmers and me—more than a week of my preliminary work.

Bookkeeping will not take care of two items: machine skill and correct routing of a season's run. Farmers are right in feeling sore when a custom man fiddles around one corner of his run and makes the rest of his customers take long chances with the weather. They have license to feel provoked when a rig owner lets worn parts go without replacements and then has a bad break as he starts a job. But the wise custom man will take care of these matters. He will tell the truth about when he can get to each job. No fair-minded farmer will hold him accountable for a faulty bridge or a bad rainstorm.

When a man has shown ordinary judgment and common sense in overhauling his equipment and arranging his run, his success and satisfaction becomes largely a matter of keeping good records. These tell a story which can not be disproved.

Wood Sawing

BY J. CROW TAYLOR

THE more extensive use of farm tractors is naturally making for a wider use of cordwood saws and similar power-driven devices for cutting up wood on the farm, both for home use and for market. Here, as elsewhere there is room to use judgment both in selecting the equipment and in operating it.

On this point there comes to mind some pictures of traction-driven cord, wood saws, in one of which there were three men at work sawing comparatively large sticks into what seemed to be cordwood.

The point of criticism in this is that it called for three men. What we are after today is labor-saving, and we should seek to select and so set up a wood-sawing rig that one man can operate it. It may be advantageous to have other men helping to bring timber to the saw or taking it away and piling it, but the point is, the fewer men required to do a given work the better.

Ordinarily, timber to be cut on a table saw should be small enough that one man can pick it up and handle it and do the work of sawing. Timber so big that it takes two or more men to handle it might better be cut just as it lies with some of the portable drag saws; if there is much of it to be handled, special racks or carriages should be devised so as to eliminate the use of so much man power in cutting it.

The object in using a power-driven wood-saw is to save labor. True, it will save some labor under any conditions. Two or three men working at it will give a splendid account of themselves as compared to the same number of men chopping and sawing by hand. That is not enough, though, in installing rigs for sawing wood; one should seek to reduce the labor element to the minimum, and for general-purpose work should strive to have a rig that one man can operate alone if necessary.



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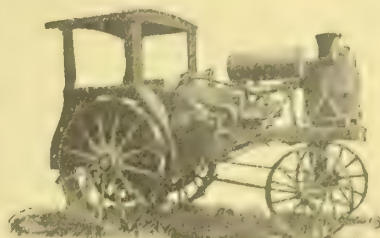
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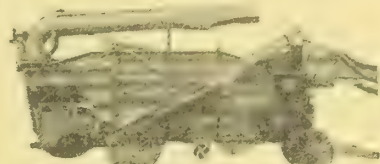
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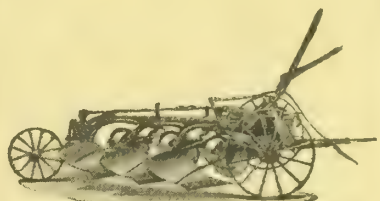
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The American Thresherman and Farm Power

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A PAGE WITH THE EDITOR

WITH daylight-saving disposed of for 1920, the farmers will do well to ascertain if, as a body, they wish to perpetuate the plan during the summer of 1921.

General editorial opinion, in the past, has been pretty well agreed that the main sponsors of the system were the office and factory workers, the main opponents the farmers. Does the daylight-saving plan cause enough inconvenience and loss to farmers that they want it to be abandoned? If so, now is the time to think and talk about the matter. Your congressmen and state legislators are the men to see; convince your congressman that his district is largely against the plan, and you will be accomplishing more than by letting out an awful yell when you hear, next spring, that some enterprising body of public servants has decided to run cities and states on different schedules than the railroads, the telegraph lines,—and the sun!

IN the matter of the proposed public highway law, to be urged by a powerful syndicate of interests in all the states whose legislatures convene this year, and which is explained more in detail on page forty-eight, we are obliged to take serious issue with the views expressed by its backers who have seemingly not stopped to consider the important industry of threshing. Neither have they considered the needs or convenience of other owners of traction engines and tractors.

Nobody wants to see the public highways protected from abuse more than this publication. It was a pioneer in the good roads' cause, and there is no question about there being a demand for everybody to help build good roads and prevent their unnecessary abuse after they have been built. But this is no excuse for going beyond all reason, as this proposed law does with reference to the rights of many thousands of persons concerned.

The thresherman, in his going about from place to place, necessarily causes a certain amount of injury to roads in bad weather, but this injury is not so great as sometimes is claimed, and certainly is not so great as the injury resulting from the rubber tires of fast moving automobiles. Should not the fact that the thresherman's business is as important as any other in the world—and without which we could not

have bread—be considered important enough to justify the repairing of roads which may unavoidably be damaged? Should the millions of dollars' worth of threshing machinery now in use be confiscated or its owners be penalized beyond reason because of the ignorance of a faction of men as to its importance?

Every thresherman who is interested and who does not join with his friends in contributing of his means and the giving of a reasonable portion of his time to protect his own interests in fighting this proposed law, is criminally negligent of his own interests. When your house is on fire is a poor time to think about having it insured. The National Association of the Brotherhoods of Threshermen is lending every effort to defeat this law in every state where it is introduced. What are you doing, brother, in your own behalf? Waiting to be carried along on flowery beds of ease, or are you going to take a hand in fighting for your rights before you are legislated out of house and home?

THE threshermen of the various states who feel disappointed in not having the Editor attend their conventions will appreciate the fact that many causes arise to make this impossible, and no one regrets it more than the Editor himself. If I did not love you all as my brethren, and if I had not labored long and faithfully in your cause, you might feel that this was mere lip service, but I know that you will realize the fact that these conventions, coming in the winter when the weather is cold and disagreeable, make traveling a hardship at times and the risk of my health is too great. I want to remain with you a few years longer, if possible, for my work is not yet finished.

Then, the exceedingly heavy expense of travel, where we have other representatives covering the ground, must of a necessity be kept down to the very minimum, for these are trying times in which to cover the heavy cost of production in journalism. A comparison of the size of any publication at this time with that of other years will give one an idea why the sails must be kept furled and the ship of state kept close to shore.

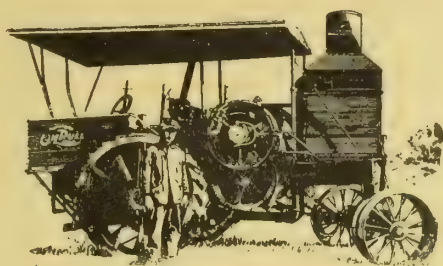
The magazine which breaks even on its finances in the year 1921 is to be congratulated,

and if this publication received for its subscriptions in proportion to cost of production in other years the price would be at least three dollars a year, whereas the advertising patronage is hardly one-half normal caused by an unnecessary stampede among manufacturers.

With these conditions frankly stated, if the Editor cannot be with you, brethren, you'll know the cause. In the opinion of the Editor, these conventions should always be held in the spring and summer. The argument that this is the busy season is no argument at all. If the business is worth considering, it's surely worth giving two or three days at any time of the year to its consideration. Silé will do his best, and angels can do no more.

JUST a word to threshermen and owners of traction engines and tractors. The adverse legislation which is now in the incubator to be introduced in the various legislatures will require much time and expense to prevent its being enacted into law. You can't fight the devil excepting with fire, and those who are interested in having the public highways kept for pleasure vehicles, rather than for the use of heavy machinery propelled by power, will have plenty of brimstone to smoke us out if we are not watchful of our own interests.

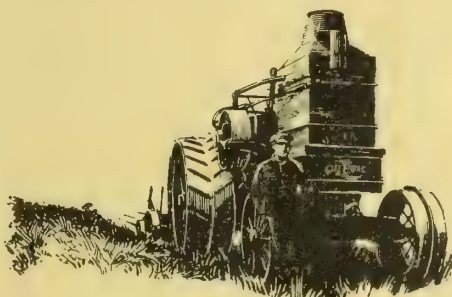
There are enough friends of the farmers and engine owners to look after these matters, but you can't travel and pay hotel bills on hot air these days. The National Association of Brotherhoods of Threshermen needs money to conduct this campaign, and every owner of a threshing outfit, tractor or traction engine can well afford to subscribe one dollar to help carry on this work. Some of you, many of you, will be called on to pay many times this amount if these bills are enacted into law, and to your sorrow. To all readers who feel that they want to help us in this work by making contributions, the Editor will acknowledge them and forward all subscriptions of this nature to the National Association of Brotherhoods of Threshermen. It's your fight more than ours, and you owe it to yourselves to help your friends who are looking after your interests without the hope of fee or reward. Let all who send remittances state specifically that contributions are for this purpose.



"Old Number One," the first OilPull, built in 1909, has worked ever since and isn't half through. Repairs cost less than 5c a day. Owned by Frank Schultz, Agar, S. Dak.



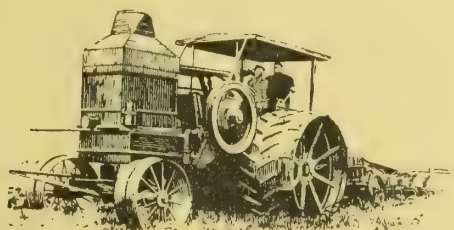
OilPull Number 174, built in 1909, 12 years ago. The owner, C. J. Chandler, Lincoln, Kan., says it will last another decade. The only renewed parts of motor are four piston rings.



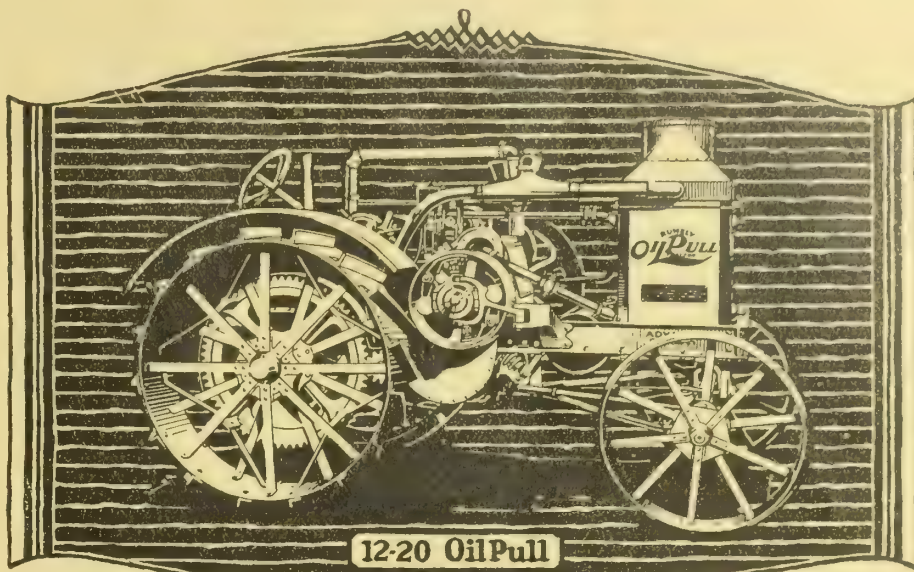
OilPull Number 314, owned by F. Gasperich, Onida, S. Dak. Built in 1909, it has cropped from 600 to 900 acres a year. Pulls eight bottoms in soil so tough that eight horses can't pull a single bottom.



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OilPull Number 437, bought in 1910, owned by James Moss, Blue Island, Ill. Is still "young" after eleven years of hard, faithful work on the farm, and moving buildings at odd times.



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Economy of upkeep is as marked. Less than \$200 has been expended on "Old Number One" for repairs during its twelve years of work.

And you can buy the Rumely Ideal Separator or the Rumely Universal Steamer with the same assurance of dependable performance, for they are the product of 80 years' experience in the building of high grade power farming equipment.

It is but the part of wisdom to prefer equipment with records of performance such as this and in addition you have the benefit given by the Rumely distinctive design and thorough construction.

Talk with your Advance-Rumely dealer or write us direct.

ADVANCE-RUMELY THRESHER CO., Inc.

LaPorte, Indiana

29 Branch Offices and Warehouses

ADVANCE-RUMELY

Organization Notes

THIS column has received a fine statement of the benefits of threshing organization work from W. H. Newsom, president of the National Association. This bulletin was issued as a special aid to the work of organization in North Dakota, the report of whose convention will appear in the February issue.

Mr. Newsom does not confine his statements to generalities. He shows concrete benefits, accomplished by legislative action or coöperative effort in each of the eighteen states which have learned the advantage of safeguarding the threshing interests by the only practical machinery:—an organization of the men whose interests must be protected. Any reader of this column will be mailed a copy on request. Address Mr. Newsom at Elizabethtown, Indiana.

The program of the annual convention of the Pennsylvania Threshermen's and Farmers' Protective Association is explained in full in "The Right of Way" (All the Roads for all the People, is its motto) for November 30, 1920. The issue for November 30 is No. 4 of Volume 6 of this interesting magazine of twenty-four pages, issued bi-monthly as the official organ of the association. It is full of information regarding the doings of the Pennsylvania threshermen, and it keeps close watch on all legislation affecting threshing interests in its state.

The program of the Oklahoma Threshermen's Associations' Tenth Annual Convention is at hand. On its cover is a summary of the things the Oklahoma brothers will want to know about their convention. Any thresherman can secure a copy by writing John A. Scott, 600 E. Elder Street, Oklahoma City, Oklahoma.

A letter from Charles F. Blue, Mentone, Indiana, shows that he is keeping ears to the ground for any moves that will threaten threshing interests. He is taking exceptions to the arguments advanced against cleats by Mr. Burgess and the Decatur Motor Club of Illinois. It seems that Mr. Burgess has advocated the removal of cleats from traction engines. Regarding this point Mr. Blue says:

"Here are just a few reasons why threshermen would be helpless without the cleat. In the sand, in plowed fields, in stubble fields, when they are burned out by drouth, in barn lots where there is manure, when they have to cross ditches and creeks where the bridges are dangerous, on

oiled roads, on hills, in thin mud on roads and in many other places, cleats are necessary for personal safety. Above everything else, such a law is unconstitutional under article IX of the Amendments. The enumeration in the Constitution of certain rights, shall not be construed to deny or disparage others retained by the people. Also, it is denying the rights of many, and granting special privileges to a few, which is an open defiance to the constitution of the United States of America.

"I do not want to be misunderstood in this letter. I do not want to be socialistic, but I want to be one hundred percent American, denying no body the rights and privilege of citizenship."

E. F. Gritten, secretary-treasurer of the Vermilion (Illinois) County Brotherhood of Threshermen, sends the following clipping. As he points out, there are one-hundred and fifty-five miles of brick and concrete pavement in his county, and the sustaining of this case will almost prevent the continuance of present threshing methods in his country. The provoking thing about this case is that no damage to the pavement or road was claimed; there was merely a technical violation of the law! How long, O Lord, how long!

Here is the news item:

Thresherman Found Guilty to Test Case

Following the conviction in the circuit court yesterday of Zimmie Fisk, a thresherman, of driving a metal vehicle over a pavement without planking under its wheels, steps were taken by the defense to carry the case to the supreme court to test the new law making such action a misdemeanor.

William Foster and Hugh W. Foster were indicted with Fisk, at the instance of Supervisor Scott Johnston, who happened along when a traction engine was being run onto a paved road. Following the calling of the case for trial yesterday, the case was nollied by State's Attorney Lewman as to William and Hugh W. Foster, and the trial was resumed with Fisk as the lone defendant. The latter was represented by Rearick & Meeks, of Danville and T. C. Buxton, of Decatur, representing the Illinois Brotherhood of Threshermen.

The jury returned a verdict of guilty and Judge Brewer imposed a fine of ten

1921 Brotherhood Convention Dates

State	Place and Date	Officer
North Dakota	Fargo, January 3, 4	H. T. Monson, Acting Sec'y
Minnesota	Minneapolis, January 4, 5, 6	E. A. Gross, Sec'y
Indiana	Indianapolis, January 11, 12, 13, 14	W. E. McCreery, Sec'y
Ohio	Columbus, January 18, 19, 20	George Durban, Sec'y
New York	Rochester, January 24, 25, 26	M. T. Small, Sec'y
Oklahoma	Oklahoma City, January 25, 26, 27	J. M. Bailey, Sec'y
Pennsylvania	Harrisburg, January 27, 28, 29	J. A. Ross, Sec'y
Ontario, Canada	London, January 27, 28, 29	Byrell Harris, Sec'y
Kentucky	Louisville, January 31—February 1, 2	J. Van Fletcher, Sec'y
Bi-State	Toledo, February 3, 4, 5	W. O. Kiracofe, Pres.
Nebraska	Lincoln, February 8, 9, 10	E. M. Samson, Sec'y
Kansas Threshers	Topeka, February 11, 12	Tim Payne, Sec'y
Michigan	Lansing, February 15, 16, 17	B. A. Dickey, Sec'y
Wisconsin	Madison, February 22, 23, 24	L. A. Clarke, Sec'y
Illinois	Peoria, March 1, 2, 3	J. M. Boyer, Sec'y
Iowa	Des Moines, March 8, 9, 10	A. W. Lembke, Sec'y
South Dakota	Sioux Falls, March 15, 16, 17	W. A. Swark, Sec'y
Kansas	Salina, March 22, 23, 24	O. E. Snyder, Sec'y
Missouri	Moberly, March 29, 30, 31	Albert Smith, Sec'y
New Jersey	Trenton, April 4, 5	S. C. Coder, Sec'y
Delaware	Dover, April 6, 7	Walter Geist, Sec'y
Maryland	Frederick, April 8, 9	William H. Renn, Sec'y

dollars and costs, after which he gave a writ of supersedeas.

The defense attacked the constitutionality of the new law, declaring it is unfair and discriminatory, because it singles out a certain class of vehicles and does not prevent other vehicles which may be heavier loaded, to use the roads without restriction. The law, which was designed to protect the paved roads, reads in part as follows:

"No traction engine or other metal wheeled vehicle, weighing more than four tons, including the weight of the vehicle and its load, shall drive up onto or off or over the edge of any paved highway in this state, without protecting such edge by putting down solid planks or other suitable device to prevent such vehicle from breaking off the edges or corners of such pavement."

Threshermen of Illinois belonging to the brotherhood have organized to test the constitutionality of the law in the higher courts, and the Vermilion County case will be watched with interest by their members, county and road officials and attorneys throughout the state.

The column is in receipt of a little pamphlet of the Illinois Brotherhood of Threshermen. On its first page is a picture of two threshermen shaking hands, with this caption underneath. "In Union there is Strength."

Brother Davidson has the right idea. It looks as if in lack of union there is ruination for a lot of good tax paying threshermen who helped to build these roads. You didn't hear much kicking about cleats when the traction engines were extending these fine pavements across the county.

W. H. Newsom is doing an admirable work in carrying the fight against the iniquitous uniform vehicle law right to the source. He is not afraid to enter a room-full of rich joy-riders who are intent on throttling the thresher and tractor owners in order to assure more speed to the motorist. The threshermen are fortunate in having a man so able to represent their cause. His fluency, courage and diplomacy have been used in many a battle of wits, unknown to the average thresherman, and he should certainly be provided with funds necessary to carry this fight into any hotel convention room where these persistent persecutors of threshermen attempt to hold a caucus. He deserves lots of aid.

The University of Minnesota will welcome any thresherman who can visit the University farm, St. Paul, during the winter season. Short, practical courses for threshermen are being offered and we have no doubt that any Minnesota brothers will be repaid for the trouble of making a trip to the office and work shop of Wm. Boss, Chief of the Agricultural Engineering Division, who extends this invitation. Prof. F. W. Duffee, of the University of Wisconsin, Madison, has extended a similar invitation to all Wisconsin threshermen.

These great schools are doing all they can to promote education and efficiency among farmers and threshermen. The threshermen, as taxpayers, should feel that these schools are their institutions and that they are entitled to share in the benefits of the short courses.

The award against Frank Fields, thresherman, and Albert Bragg, on whose farm he was threshing, should serve as a reminder to all threshermen that accident insurance is as necessary as fire insurance. It seems diabolical that a house can always find means of burning just after the insurance has expired. That is what happened to Mr. Fields, in the line of accident insurance, and as a result the Indiana Industrial Board rendered a big damage suit against him.

With insurance to be had at present low rates, don't take a chance. Protect both yourself and your customers. Learn the details at your state convention.

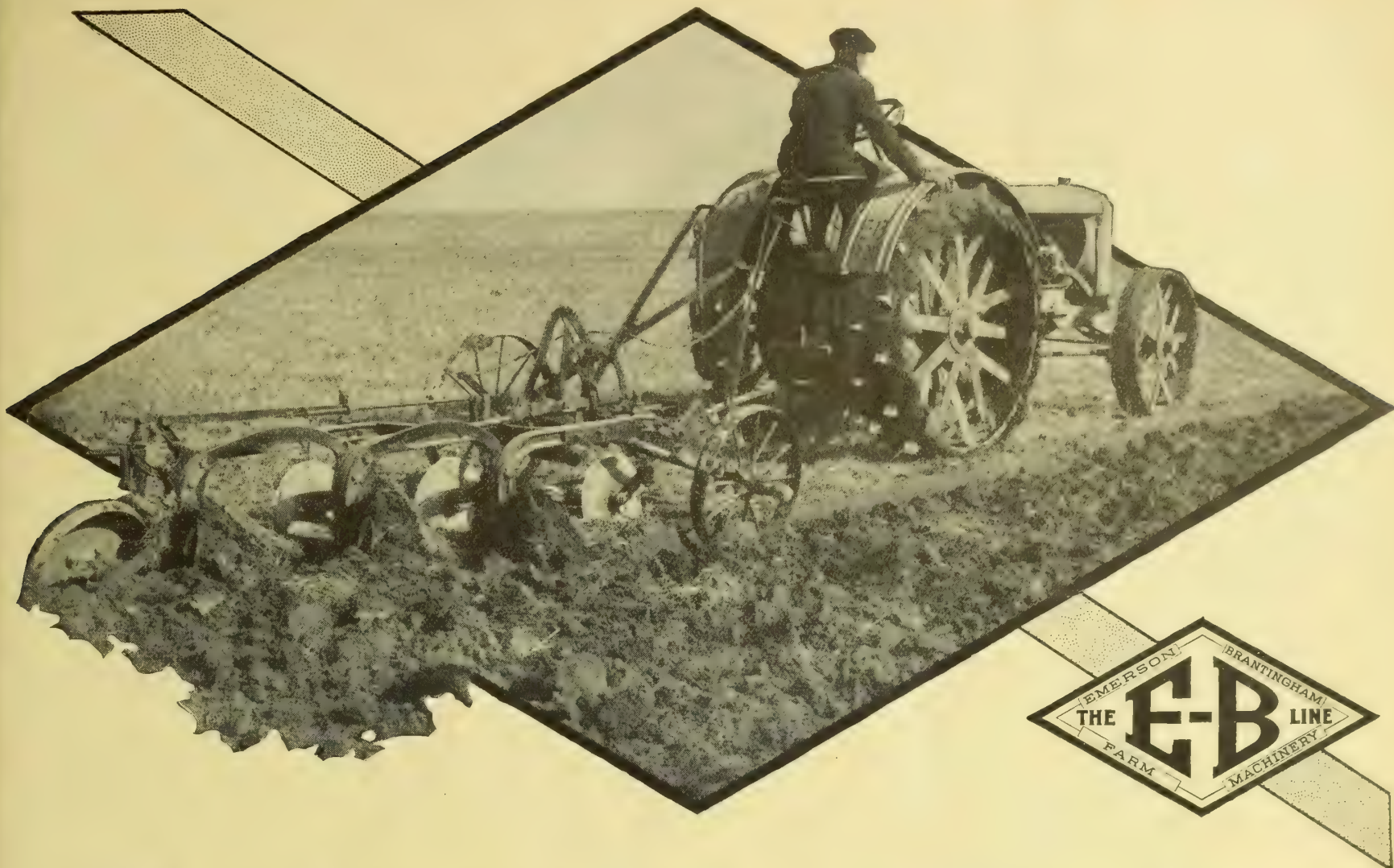
This letter comes from New York State:

"We wish to again call your attention to the fifteenth annual convention of the New York Brotherhood of Threshermen to be held on January 24, 25, and 26, in Royal Mirror Hall, 15 South Avenue, Rochester, New York. All attending will please note the location of meeting place as it is a different place than we have been using for several years. Just a few steps from Main Street on South Avenue to Number 15; watch for the sign, take the elevator to the fourth floor and you will be among friends.

"The committee in charge has endeavored to arrange a program that will be interesting, entertaining and instructive. We urgently request that everybody connected with the business of threshing and allied interests to be with us.

"We will not list our entire program; but come and meet W. H.

(Continued on page 48.)



The Responsibility of Guarding a Reputable Trade-mark

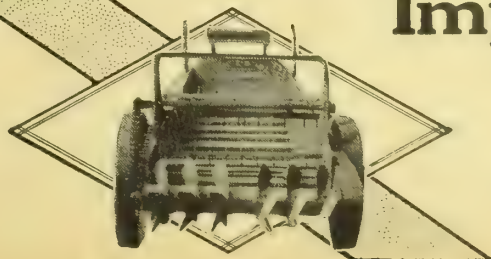
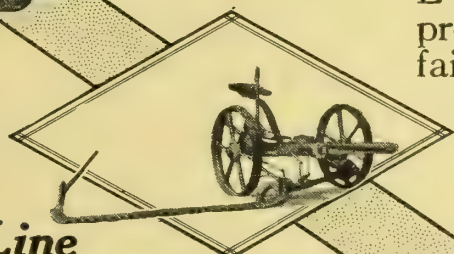
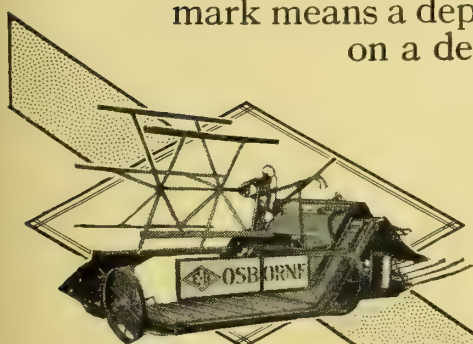
Sixty-nine years of manufacturing success has placed upon the E-B Company the responsibility of maintaining that quality for which the E-B trade-mark stands.

In these years thousands and thousands of users have shown a lasting faith in E-B's intent and ability to produce and sell nothing less than the best.

Whether it is on a plow or tractor, a grain binder or a thresher, the E-B trade-mark means a dependable farm tool bearing the full guarantee of the maker. Seen on a dealer's store it is a reliable guide to good service and fair dealing.

Nothing will ever be allowed to detract from the well-earned reputation of that trade-mark. Established primarily on foot-lift plows and wide-cut mowers, its protection today covers tools for every farming operation, for the E-B line is complete.

E-B will jealously guard the excellence of E-B products, knowing that thereby your continued faith and patronage is assured.



**A Complete Line
of Farm Machinery
Manufactured and
Guaranteed by
One Company**

**Emerson-Brantingham
Implement Co., Inc.**

Established 1852

Rockford, Illinois



IT'S time to take inventory of your belts and to arrange for replacement.

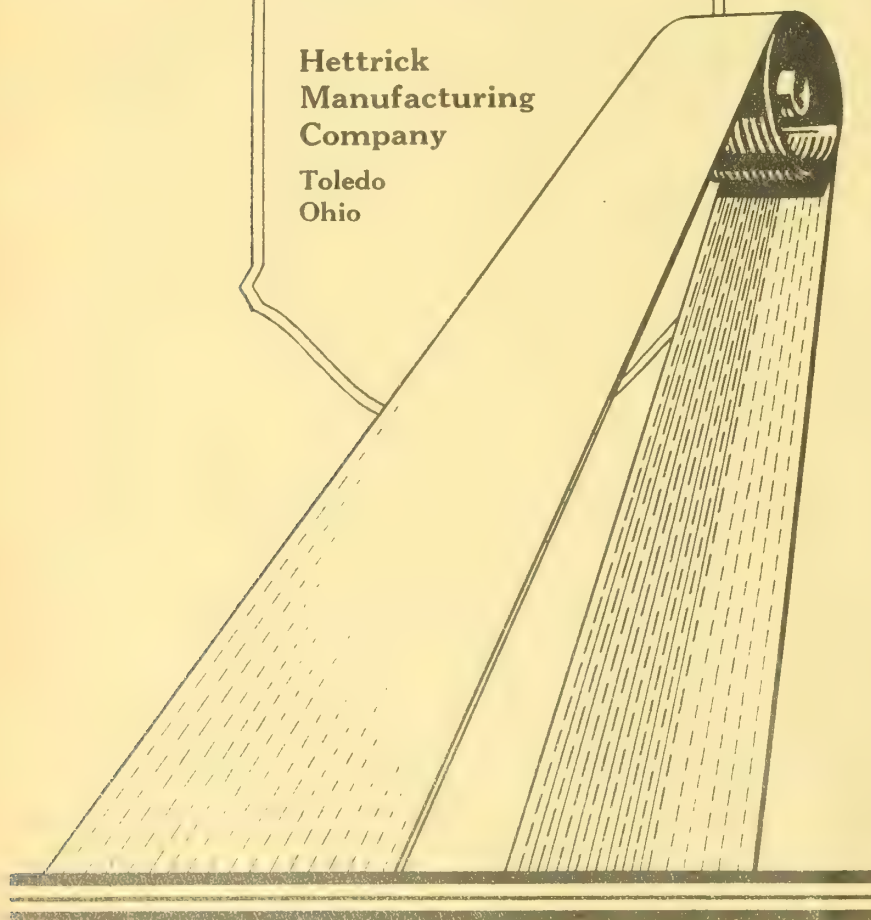
And this brings you an opportunity. You've heard and read so much about Hettrick Canvas Belts. Now put them to the test on your own machines.

You'll find absolutely true every claim of belt economy, of longer and better service. You'll agree that they're better belts than you've ever known before.

All lengths—large belts, small belts, endless—for every power machine. Try Hettrick and cut your belting cost.

**Hettrick
Manufacturing
Company**

Toledo
Ohio



Hettrick

Canvas Belts

Aunt Malinda

WELL, we had one full meal anyhow if my Christmas truck was up to standard, of which you, my readers, must be the judge, but they've put us back on a diet again and while I talked tolerable plain United States to Silas about it he 'lowed that if we got through with the year of our Lord 1921 on half rations we might be thankful.

"Malinda," says he, "this sheet iron world of business has been in volcanic eruption for several years and it's reached the coolin' off period, and we've got to 'turn the knob to the right' in many ways or most of us will be eatin' bean soup instead of 'b'iled oysters,' and drinkin' 'branch-water' instead of buck beer."

Always, about the time the moon begins to look like a finger nail in the first quarter of the first month of the year, and gets in perihelion with the evening star, Silas feels the need of green persimmons in a business way, but the way he lets go at the close of the year generally soaks up all that he's saved durin' the close-fisted season.

But, gettin' down to the real facts, if it wasn't for the fact that the money-bags can make more by squeezin' down on everything else and boostin' up on interest and discounts, we'd soon be enjoyin' a panic beside which those of '73, '92 and '96'd look like a frizzly chicken beside a turkey gobbler. Folks have 'lowed themselves to run riot in nearly everything and 've gone on the theory that "the higher up the cherry tree the riper grows the cherry," until we've blown the roof off and now we've got to hug the financial shore mighty close and keep our sails closely furled until prices adjust themselves or else, as Silas says, "Our friends will be walkin' slow behind lots of business concerns, and that before so very long."

For my part, I'm goin' to do my best to keep step with the procession and help "bear the market" until the "bulls get done snortin' and get rings in their noses."

None of us care to be told of our shortcomin's but hardly any of us go to "class meetin'" any more and stand up and confess our blunders, but if we'll all begin bringin' these facts right home instead of considerin' 'em like folks do the "milk-sick," always in the next township, and usin' the first person singular, it won't take long to diagnose the case and find the remedy.

Did you ever hear a sermon that criticised, or a speaker that ripped folks up the back for their shortcomin's that you didn't take it for granted that they maybe meant all your neighbors but never touched you? That's human selfishness that comes over us like a winter in the Arctic Circle, which we know will come if the world continues to roll around but whose shadows do not impress us until the sun refuses to shine and we realize that darkness is upon us.

Now that we women can vote and wear bloomers and high-topped shoes, suppose we take a hand in this "coolin' down" process in the business world and help the men-folks out all we can. Of course, they want us to do most of the hedgin', they always do, but then, lots of us have kicked out the dashboard of reason and 've been joy ridin' on thirty-seven-cent gasoline when we used to be thankful for a ride to church behind the work horses on Sunday instead of chasin' over one hundred miles of good roads just because we loved to see "the wheels go round."

There's lots to do. The harvest of retrenchment is indeed heavy but the laborers are few. So we must join the union of reason and put in our full eight hours a day until things get settled down once more when we can begin to think about "keepin' up with Lizzie" again. In the year 1921 we have a duty to perform, and if we fail to do that duty we will have committed the greater sin, because the men folks need governor belts on their engines of energy more than the women do. You know that upon us depends the salvation of most of the men now on earth and without our assistance there wouldn't be another crop.

The trouble is that we've been travelin' at entirely too rapid a pace in every walk of life, and it's going to require some effort even in the country homes to get back to normal. The business blood pressure has been too continuous on the heart of commerce to keep up at the gait we've been goin', and apoplexy will surely be the result unless we twist the governor down several turns from where it's been runnin' for the last five years. It's about time that we realized these conditions and that everybody agreed to "Turn the knob to the right!"

With these scatterin' remarks and the earnest wish that every woman reader, and every man to whose these presents come greeting, will pledge themselves to do their very best all the year, I tender each and everyone my best wishes for a speedy adjustment of every business problem, and may the Lord of Righteousness be with you all the way and help you in helpin' others all through the new year.

Now I'll give Silas the first dose of the medicine he's prescribed for others by cuttin' down the New Year's dinner to the reform ration.

THIS is your show. It has been planned in the interest of all practical farmers. It has the backing of the Department of Agriculture and of all agricultural schools and authorities. The manufacturers of power farming machinery have been working for months past to make this an exhibition of products which will eclipse anything of like kind ever seen before. The program arranged is the equivalent of a college course in tractor farming. You will gain a wealth of new ideas that can at once be turned to real profit. Plan now to come



The Sixth Annual NATIONAL TRACTOR SHOW And Educational Exposition

A College Course in Tractor Farming Compressed Into Four Days

Few men can picture, even in their own minds, the tremendous growth of power farming. Rapidly it is changing many of the established laws and methods of agriculture. Certainly today it is the foremost of all great opportunities confronting the farmer in his work. You will get real cash-value information out of these lectures, speeches and exhibits. The talks will be delivered in a special lecture hall and the program also includes daily discussions, mass meetings, band concerts, etc. Everyone who attends will have a good time and a profitable one.

Here is the Program

- | | |
|---|--|
| <p>Feb. 8th <i>Soil Conservation</i>—F. I. Mann, Gilman, Ill. <i>Adapting the Farm to Power</i>—Raymond Olney, Editor Power Farming. <i>Determining Type and Size of Tractor to Buy</i>—I. W. Dickerson, Agr. Eng. and Ed., Charles City, Iowa.</p> | <p>Feb. 10th <i>Lessons from Nebr. Tractor Tests</i>—G. K. Shedd, Nebr. Coll. of Agr. <i>The Tractor and Belt Power</i>—Wm. Aitkenhead, Agr. Coll., Purdue Univ. <i>What Is Tractor Service?</i>—J. B. Davidson, Ia. State Coll. <i>Community Purchase of Tractors</i>—R. U. Blasingame, Penn. State Coll.</p> |
| <p>Feb. 9th <i>The Trend of Tractor Design</i>—J. B. Davidson, Iowa State College. <i>Ignition Troubles</i>—O. W. Sjogren, Nebr. Coll. of Agr. <i>Tractor Hitches</i>—Daniel Scoates, Tex. A. & M. Coll. <i>Lessons from a Tractor Survey</i>—G. W. McCuen, O. State University.</p> | <p>Feb. 11th <i>Tractor Tools</i>—H. H. Musselman, Mich. Coll. of Agr. <i>Laying off Fields for Plowing</i>—F. W. Duffee, Wis. Coll. of Agr. <i>Tractor in Winter</i>—R. U. Blasingame, Penn. State Coll. <i>Housing the Tractor</i>—F. W. Ives, Ohio State Univ. <i>What the Tractor Has Done for Me</i>—By Four Real Farmers.</p> |

National figures like President-elect Harding, Secretary of Agriculture Meredith, J. R. Howard, President American Farm Bureau Federation, Joseph Hirsch, Chairman Agricultural Commission American Bankers Association, and others have been invited to speak. The American Societies of Automotive Engineers and Agricultural Engineers and a number of the foremost agricultural colleges will have educational exhibits. And don't forget that all of this is in addition to the biggest display of tractors and tractor implements that has ever been gathered.

Eight huge buildings belonging to the state of Ohio—modern, fireproof, well lighted, scientifically heated and connected with one another by covered passageways—will house this show. Every arrangement has been made for the comfort and convenience of those who attend. Write today for special free tickets of admission. Ask for our booklet explaining the entire program. A hundred thousand farmers will be here to meet the power farming experts of the country.



National Tractor Show Committee.
Columbus, Ohio.

Gentlemen:

Please send me your booklet regarding The Sixth Annual National Tractor Show. Also enclose free tickets for myself and _____ others of my family.

Name _____

Street or R. F. D. _____

City _____ State _____



What Will This Manufacturer Do for You, Mr. Farmer?

HERE is the manufacturer—the man who builds the power machine you will buy next spring. He is deciding *now* how his machine will be equipped for next year.

Will he put Rockwood, *The Drive Pulley*, on his tractor, silo filler, threshing machine or corn sheller? There is every reason why he should. He *knows* Rockwood, *The Drive Pulley*, and what it will do, just as *you* know it.

From the manufacturer's standpoint there are two points to be considered in connection with the machine he produces—

1. What does it cost *him* to build it?
2. What does it cost *you* to use it?

The first question naturally receives full and serious consideration.

ROCKWOOD *The DRIVE PULLEY*

You are interested in the manufacturer who gives the *second* question as *much* consideration as the *first*. Manufacturers who protect *your* interests are fairly certain to supply Rockwood, *The Drive Pulley*, on their machines—as in the case of Ross and Ann Arbor Silo Fillers, Avery Separators, Layne & Bowler and National pumps, Fordson Tractors, Port Huron Threshing Machines, Huber, Banting, Wood Brothers, Frick, Aultman-Taylor, Minneapolis, Cape, Illinois and many other good makes of machines.

You will naturally prefer a machine equipped with Rockwood, *The Drive Pulley*, to one that is not. With the machine so equipped you can be absolutely sure of maximum output, steady speeds and greatest durability in transmitting your belt power. It is the *only* way to be sure.

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belts surely and firmly—



[Section removed to show construction]

a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, *The Drive Pulley*, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

Write for your copy of our interesting booklet "Belt Power on the Farm."

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Ave. Indianapolis, U.S.A.

The Big Columbus Show

LETTERS from present and former advertisers of The American Thresherman and Farm Power indicate that our readers will find many familiar lines on exhibit at the Sixth Annual National Tractor Show, Columbus, Ohio, February 7-12, 1921. From advance notices, it seems that all the space in the eight large buildings leased for the show will be needed. The exhibits will cover all lines of farm power machinery.

We list herewith a number of the exhibitors who have indicated how, where and by whom they will be represented at Columbus. Keep this list as a guide at the big exposition.

The K-W Ignition Company, Cleveland, Ohio, Company Headquarters, Hotel Hartman.

Representatives who may be seen and who will be glad to meet users of K-W equipment:

C. Albracht—General Manager;
R. J. Eiseman—Service Manager;
A. E. Hanson—Sales Department;
H. C. Schroeder—Service Department;
R. E. Brown—Service Department.

Show spaces 239, 240 and 241 will show a complete line of tractor lighting outfits and magnetos.

The Rock Island Plow Company, Rock Island, Illinois.

Makers of the famous Heider tractors.

These representatives will attend:

C. E. Sharpe, Secretary;
L. F. Cannon, Trade Manager;
H. J. Heider, Tractor Engineer;
A. H. Gilbert, Assistant Tractor Engineer;
L. H. Kaupke, Implement Designer;
P. R. Preston, Advertising Manager;
W. H. Grove, Plow Expert;
H. G. Pelsue, Tractor Expert;
Ed. Thielke, Tractor Expert.

The exhibits will include the following:

Heider Model "C" 12-20 with No. 19 power lift plow attached;
Heider Model "D" 9-16 with No. 9 power lift plow attached;
Cut out Heider tractor chassis;
Heider motor cultivator;
Rock Island No. 12 tractor plow, four bottom;
Rock Island No. 7 tractor plow, three bottom;
Rock Island No. 38 tractor disc harrow;
Rock Island No. 17 power lift lister.

The U. S. Tractor and Machinery Company, Menasha, Wisconsin, will be on hand with Uncle Sam 12-20 and 20-30 tractors; they will also have a full line of Harris governor pulleys and Oliver plows. The booth numbers will be announced later.

The Climax Engineering Company, Clinton, Iowa, will be represented at Columbus by the following men:

G. W. Dulany, Jr., President;
C. B. Stebbins, Vice President and General Manager;
R. D. Upton, General Superintendent;
H. H. Waters, Chief Engineer;
T. L. Keeling, Purchasing Agent, in charge of exhibit.

Three models of tractor engines will be exhibited:

Model "K", 5"x6½", open flywheel type;
Model "KU", 5"x6½", enclosed flywheel type;

Model "TU", 5½"x7", enclosed fly-wheel type.

Located in Booths 408-9-10, Building Four.

Climax representatives will have their headquarters at The Chittenden Hotel during the show.

The Frick Machinery Company, of Waynesboro, Pennsylvania, will be glad to see old friends of the Frick line. Booth 227 in Building Two will be Frick headquarters. The 15-28 tractor and the 22-inch Junior thresher will be on display here.

The Beeman Tractor Company, Minneapolis, will be located in space 301, Building Three. Their representatives will be:

W. C. Luger.
S. E. Ainsworth.

These men will be glad to see Beeman users. Their display will be educational in character, and many tractor owners will find it worth seeing.

Users of the Allwork tractor will do well to visit the large booth of the Electric Wheel Company, Quincy, Illinois. The Allwork 11 and the 14-28 tractors will be displayed. A service booth will be maintained and the man in charge will be glad to answer all questions of care and operation.

Don't overlook the large Case exhibit in spaces three, four and five. Mr. Dechant writes:

"We expect to exhibit the Case 10-18, 15-27 and 22-40-horse power tractors as regularly equipped. In addition thereto we will have a rubber tire equipped tractor and one enameled and nickel plated cut-out 10-18 tractor revolving upon a pedestal. An electric motor aside from the one operating the pedestal will drive all parts of the tractor.

"We expect also to have one of our 15-27 tractors belted to a 26x46 Case thresher with feeder, wind stacker and swinging conveyer; grain weigher attached. The side panels will be removed, giving the public an excellent opportunity to view the working parts inside of the machine and the attachments. This outfit will be in motion so that any one interested can see just how a Case thresher works.

"We will have a display of tractor parts mounted upon special exhibition racks. There will be a two-bottom orchard plow revolving on an electrically operated pedestal and in addition to this we will have Grand Detour two, three and four-bottom sizes, also Grand Detour tandem disc harrows.

"Our exhibit will be in charge of Mr. G. G. Thornburg, our branch manager at Columbus, who will be assisted by Mr. A. W. Joseph, assistant branch manager. Some of our salesmen from the central eastern

All the Power — All the Time

ROCKWOOD PULLEY SERVICE

territory will be on hand each day of the show to take care of the wants of dealers and prospective purchasers from various territories."

Those of the home office of the Case Threshing Machine Company who expect to attend the show one or more days are as follows:

- E. J. Gittins, Vice President and General Sales Manager;
- D. P. Davies, Vice President and Superintendent of Development;
- W. B. Brinton, Vice President in charge of Grand Detour Plow Division;
- R. B. Coleman, Sales Manager Eastern Division;
- G. B. Gunlogson, Research Engineer;
- G. A. Dechant, Advertising Manager;
- W. F. McGregor, Designing Engineer.

At the date this copy was written December 23, 1920, the following companies had not been heard from, but it is almost a certainty that they will have large and interesting displays at Columbus:

- The Advance-Rumely Thresher Company, La Porte, Indiana.
- E. C. Atkins & Co., Indianapolis, Indiana.
- Bates Machine and Tractor Company, Joliet, Illinois.
- International Harvester Company, Chicago, Illinois.
- Manhattan Electrical Supply Company, New York.
- National Carbon Company, Cleveland, Ohio.

The Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, writes as follows:

"We are pleased to advise that we have contracted for spaces 630 and 631, a total of eight hundred square feet. We will exhibit for this show the following:

- Allis Chalmers 18-30 tractor complete;
- Allis Chalmers 18-30 chassis;
- Allis Chalmers 6-12 tractor with two-wheel carrier truck;
- Allis Chalmers 6-12 tractor with combination implement truck;
- Allis Chalmers Model B orchard type tractor.

"We further wish to advise that the following members of our organization will be present:

- C. E. Search, General Works Manager;
- J. F. Max Patitz, Chief Consulting Engineer;
- B. M. Seymour, Manager Tractor Division;
- P. B. Slater, Service Manager Tractor Division;
- G. J. Gardner, Sales Manager Tractor Division.

The American Bosch Magneto Corporation, Springfield, Massachusetts, has this to say:

"We plan to exhibit at the show, having already rented spaces 215 to 218 inclusive in Building Two.

"Our exhibit will consist of all standard makes of Bosch magnetos together with the Bosch spark plug which we have recently placed on the market and the Bosch impulse coupling, which is also a new product.

"Other interesting features of the exhibit will be our special fittings for installing Bosch magnetos on cars, trucks and tractors which do not come Bosch equipped.

"Perhaps the most interesting part of the exhibit will be a model service station which we will set up in our booth with complete equipment for repairing, testing and adjusting

Bosch magnetos. We shall also exhibit our Gray & Davis products."

The American Hammered Piston Ring Company, Baltimore, Maryland, sends this message:

"The features of our exhibit are to be:

"(a) A large sixty inch piston ring in which are placed miniature electric lights, which flash progressively, beginning at the extreme right and moving towards the left, in exactly the same manner as American Hammered piston rings are hammered. The lights are so placed that each ball point hammer mark is illuminated as the lights flash on—the ring and lights being mounted on a large mahogany and velvet shadow box.

"(b) In addition to this ring, there are two small display boards, each containing twelve American Hammered piston rings, all of which have given continuous and satisfactory service in motors for from forty-five thousand to eighty thousand miles. These rings were obtained by our salesmen in their respective territories, and are accompanied by letters from the users of the cars in which these rings were originally installed—each ring has its own story and its own mileage verified by a letter from the man to whom it has given entire satisfaction.

"(c) The exhibit also contains a complete set of American Hammered piston rings from the rough castings to the finished product, showing the steps taken on each operation. The outstanding feature of this part of the show is a large cut-out of the hammering machine, which shows just how American Hammered piston rings—before and after they are hammered—can be measured for the tension put into a ring by hammering."

The Aultman & Taylor Machinery Company, Mansfield, Ohio, gives us this information:

"The space we will occupy covers sections 18-19-20, in the Coliseum. We will have 2,295 square feet of space. We expect to exhibit a 15-30 tractor; a 22-45 tractor, and a 30-60 tractor; also a 32x50 separator, in skeleton form. We will also have a cut-away motor of the 30x60 type.

"We have been fortunate in having been able to arrange for some of our officers at the Columbus Club, and the balance will be at the Chittendon Hotel."

The New Britain Machine Company, New Britain, Connecticut, sends this greeting:

"The NB tractor exhibit at the Sixth National Tractor Show, will include models of each size of our tractors and various implements that we have perfected for operation with our tractor. We will also show photographs which illustrates the work which has been done by the NB tractor in various fields. We will ex-

Red Devil Good Tools

*The Strong Right Arm
of Efficiency*

A good wrench, a cold chisel, a hack saw and a plier, handy at the right time, may save many a serious breakdown in farm power equipment.

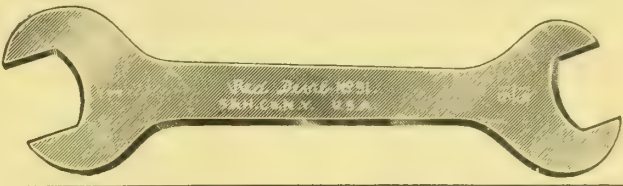
Get a set of "Red Devil" Tools and put them to work. They will make your handiness count 100%.

Each tool made of drop forged steel, individually tested and inspected. Look for the "Red Devil" trade mark stamped on each and every one. See your dealer and ask to see the line.

Write today for free tool booklet.

SMITH & HEMENWAY CO., Inc.
270 BROADWAY NEW YORK, N. Y.

Manufacturers of Pliers, Fence Tools, Hack Saw
Blades and Frames, Snips, Auger Bits, Screw Drivers,
Glass Cutters, Lock Washers, Cold Chisels, etc.





LUNKENHEIMER

GASOLINE ENGINE

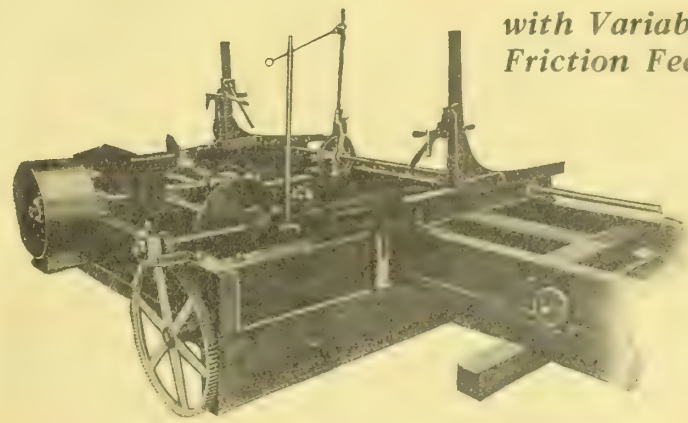
APPLIANCES

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI

WRITE FOR CATALOGUE NO. 3-C

Dixie "G" Saw Mill

*with Variable
Friction Feed*



America's Most Popular Small Saw Mill

— Thousands in Use —

CAPACITY: 2,000 to 10,000 feet per day with 8 to 20 H. P.
Steam, or 12 to 30 H. P. Gas, Kerosene or Tractor Engine.

HILL-CURTIS COMPANY
1504 North Pitcher Street Kalamazoo, Mich.



ENTERPRISE "Tractor Special" Saw Mill

LUMBER is always in demand on the farm to repair buildings, build sheds, graneries, etc., and there is standing timber on many tracts of ground that can be cut down and sawed into lumber for these purposes, by the use of a suitable saw mill.

THE "TRACTOR SPECIAL" SAW MILL was designed for farm use, and any one can make valuable lumber from all kinds of logs, using a tractor or other light power from 10 H. P. and upwards.

The "TRACTOR SPECIAL" is easily moved, being of light weight, yet is made rigid and strong for accurate sawing. The price is so low that any farmer who owns a tractor and has standing timber can afford to have one.

Send for our special circular today.

THE ENTERPRISE COMPANY

1050 Main Street, COLUMBIANA, O.

136 Liberty Street, NEW YORK, N. Y.

Mention The American Thresherman and Farm Power

Start Your Son In Business

Keep Him
On the
Farm!

WE HAVE started hundreds of men--farmers and farmers' sons --in the big-money business of ditching. No end to the work to be had. No real limit to the profits!

Right in your locality--spare time or full time--you can do what others are doing everywhere. That means net earnings of five thousand dollars a year or more. It means a business of your own *with work always waiting*. It means interesting work that is easy and requires no experience.

We will show you how to do this with a

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

This ditcher cuts through frost and hardpan. It gives you 100 to 150 rods of ditch each day--every foot clean, smooth, true to grade and ready for tile. Furnishes its own power. Operates well in swampy land.

Get This Free Book

Write us today. Tell us the soil conditions in your vicinity and average depth of ditching. We will then send you a free copy of our big book, "Dollars in Ditches." And our service engineers will tell you the exact size ditcher you need. They will show you how to get started *right*--show you how others make big money--*and how you can make it too*.

Hundreds of Letters Like This

"I excavated a trench 16,000 feet long, average depth 25 inches. I received 1c per lineal foot, or \$160 for the job and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him, tightened the governor to gain speed and in 2 3/4 hours had the job done. Average of 800 feet per hour for the 2 3/4 hours at 1c per foot is \$8.00 per hour."

JOHN C. OFFER, SANDUSKY, O.

Write today for full details. No obligation.

The Buckeye Traction
Ditcher Co.

199 Crystal Ave., Findlay, O.

Mention The American Thresherman and Farm Power

hibit in spaces 507 and 508. All old and new friends will be welcomed heartily."

The Cleveland Tractor Company, Cleveland, Ohio, expects to exhibit at the National Tractor Show and will occupy spaces 428, 429, 433 and 434 in Building Four. Their writer says:

"We will have in our exhibit four standard Cletracs and one Cletrac complete with cab and snow plow and special trucks as delivered to the city of New York for street cleaning work. We will also show the approved improvements behind the tractors and will endeavor in every way to make our exhibit as educational as possible.

"The actual tractors will be supported by a considerable number of photographs and transparent negatives so that the farmer who visits us will get a clear idea of all that the Cletrac does.

"In our opinion, a National Tractor Show should be a big factor in selling tractors to this part of the country and we will do everything we can to get the features of our machine across to those who attend."

Deere & Company, Moline, Illinois, writes us:

"It happens that we have very little information available regarding the part that we will take in the National Tractor Show to be held at Columbus; we wrote to our Columbus office, and they advise us that they are going to have on exhibit the following implements:

Waterloo Boy tractor;
Special cut-away tractor engine;
No. 6 four-bottom tractor plow;
No. 5 three-bottom tractor plow;
No. 40 tractor plow;
No. 45 tractor plow;
No. 35 five-bottom plow lift tractor disc plow;
No. 245 power lift tractor lister;
Model "B" nine-foot double action pony tractor disc; harrow;
No. 3 mounted Marseilles sheller;
Model "L" eight-foot double action tractor disc harrow;
12x7 Van Brunt single disc tractor drill with power lift.
Possibly a Brillion tractor pulverizer.

"This should furnish an interesting display of Deere products to visitors."

The Eisemann Magneto Corporation, Brooklyn, New York, makes this statement:

"We wish to advise that we will occupy spaces 404-5-6-7 in Building Four at the Sixth National Tractor Show, Columbus, Ohio. Our exhibit will comprise a complete line of ignition equipment and accessories. The representatives in charge will be as follows:

A. T. LeBlanc, General Sales Manager;
P. G. Sedley, Resident Manager, Chicago office;
E. H. Hohenthal, Resident Manager, Detroit office;
R. A. Oglesby, assistant manager and Sales Engineer, Chicago.

"The company will have a department at the Exposition devoted exclusively to service and the handling of service questions. This will be in charge of our Mr. Fred Voelker, of

the Detroit office. Other service representatives will be R. S. Brown and O. W. Barnes."

The Holt Manufacturing Company, Peoria, Illinois, recalls the Kansas City show in pointing out features for this year:

"Our exhibit will include the latest model five-ton and ten-ton 'Caterpillar' tractors. While there is no substantial difference between these tractors and the 1920 models, there are added refinements and conveniences which make it more profitable to own and to operate 'Caterpillar' tractors.

"Last year we inaugurated an exhibit of service, inspection and manufacturing methods which was one of the outstanding features of the Kansas City show. Our exhibit this year will be even more elaborate. Extensive laboratory testing equipment as well as inspection gauge will form a prominent part in this exhibit.

"Within the next ten days we will have a complete layout of our exhibit and will be glad to furnish any reader of this item additional information concerning it."

The Huber Manufacturing Company, Marion, Ohio, makes a statement that is brief and to the point:

"We will exhibit two of our tractors and one of our Junior separators. Our space is Number Two in the Coliseum. Users of our products as well as prospective owners will find it worth while to visit our exhibit."

The Hyatt Roller Bearing Company, Chicago, Illinois, sends this announcement:

"This year we will show the progress that has been made in the use of Hyatt roller bearings in all kinds of power farming equipment, such as tractors, plows, threshing machines, motor cultivators, windmills, binders, ensilage cutters, feed grinders, corn shellers, manure spreaders and sprayers.

"Our space includes Booths 214, 215 and 216. Our headquarters will be at the Deshler Hotel and the following members of our organization will be in attendance:

C. M. Eason, Vice President;
H. O. K. Meister, Sales Manager;
O. W. Young, Engineering Manager;
F. N. G. Kranich, Manager Implement Division;
H. G. Weaver, Sales Promotion Manager;
H. M. Carroll, Advertising Manager."

The Norma Company of America, New York, New York, has furnished the hotel room numbers of its representatives to our readers. There is hospitality for you. They write:

"We have been assigned a booth Number 256, at which we will exhibit a complete range of Norma open type precision ball bearings suitable for ignition apparatus, of all types, lighting generators, radiator fans, etc. We will also display a complete range of ball thrust bearings.

"The show will be attended by
O. P. Wilson, Vice President;
R. E. Hecker, Cleveland Representative;
D. E. Batesole, Field Engineer;
Norman Bell, Assistant Sales Manager.

"We will occupy rooms 505 and 509 at the Deshler Hotel.

The R. D. Nuttall Company, Chicago, Illinois, will be glad to meet all visitors. They write:

"Our space number at the show has not been definitely assigned as yet, and there is little information which we can give. We would state, however, at this time that we will have on exhibition a live axle transmission, jack shaft transmission, steering unit and several types of tractor gears. Many tractor owners will find it worth while to inspect this exhibit. Very likely C. H. Thomas, Sales Engineer, will represent us there."

S K F Industries, Inc., New York City, plans to show a complete line of its self-aligning single row ball bearings and deep groove double row ball bearings, in addition to models which will bring out the features of self-alignment.

The sales engineers will be on hand to answer any question concerning ball bearings, and literature applied to the tractor industry will give pertinent facts concerning ball bearings together with illustrations and drawings which show their application.

The following representatives will be in attendance and will make their headquarters at the Deshler Hotel.

J. B. Castino, District Manager, Chicago;
F. G. Rider, Sales Engineer, Chicago;
J. C. Long, District Manager, Indianapolis;
R. C. Byler, Advertising Manager, New York.

The Avery Company, Peoria, Illinois, writes:

"About the only thing we want to say about our Columbus Exhibit is the fact that we will be there, and be there strong.

"This display will be under the direct supervision of our Columbus branch house manager, J. H. Hardgrove, and Mr. Barbour, advertising manager, who will exhibit the full line."

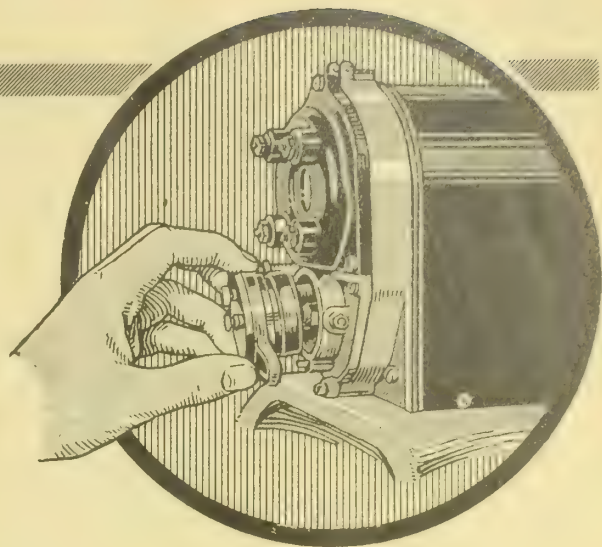
The Vacuum Oil Company, New York, telegraphs us that T. S. Witherbee, their special representative at the Columbus show, may be found at the Deshler Hotel and at their booth, where charts will show the grades of Mobiloils to be used on all types of motors.

The J T Tractor Company, Cleveland, Ohio, will likely be represented at Columbus by C. R. Nickols, assistant sales manager, who writes as follows:

"We have been assigned spaces 243-44-45-46 at The National Tractor Show at Columbus, Ohio, February 7 to 12.

"It is our intention to show the J T tractor with agricultural and road building equipment, if we are permitted to make use of the latter."

The K-W Removable Timer What It Means to Your Tractor



The spark which makes your tractor go depends on two platinum "points" in the "timer" or "circuit breaker" of the magneto. These points close and open for every spark—hundreds of times per minute.

Every ignition system contains a circuit breaker. Have you ever examined your circuit breaker, or because of its location are you content to hope it will never cause trouble?

Good operation of an ignition system demands that points be kept free from oil and dirt, dressed to keep the two surfaces flat and adjusted to open 1-64 of an inch.

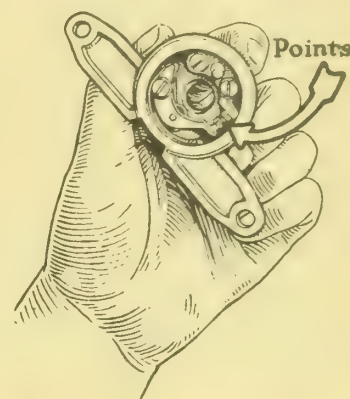
To neglect these points means certain trouble—to care for them takes only a few minutes a year if the magneto is properly constructed.

On the K-W Magneto this entire mechanism (—the complete circuit breaker, platinum points and all) can be removed from the magneto as one unit in half a minute's time and held in the hand while inspecting, cleaning or adjusting.

This is one of the advantages of K-W Magneto design. It is made easy to care for and therefore gives better service.

Carry an Extra Timer

Many farmers know that an hour's tractor time lost often costs more than several magnetos. They equip their tractors with the reliable K-W Magnetos and carry an extra timer or circuit breaker which can be slipped in place instantly when the points need replacing. The old points can be replaced at leisure. Thus constant operation is assured.



Magneto

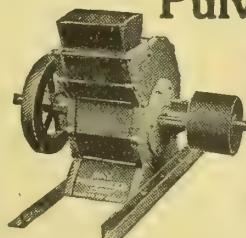
Fires Any Fuel—Gets Maximum Power Out of Every Drop

THE K-W IGNITION CO.
2837 Chester Ave., CLEVELAND, OHIO, U.S.A.

Mention The American Thresherman and Farm Power

PATENTS
Hand Books on Patents, Trade Marks, etc., sent free. Our 74 years of experience, efficient service, and fair dealing, assure fullest value and protection to the applicant. The **Scientific American** should be read by all inventors.
MUNN & CO., 694 Woolworth Bldg., N. Y.
Tower Bldg., Chicago, Ill. 625 F St., Washington, D. C.
Hobart Bldg., 582 Market Street, San Francisco, Cal.

Limestone Pulverizers



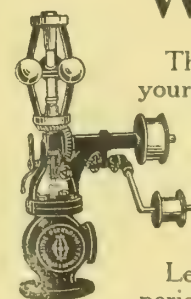
*More capacity
Less power
Cost less
Last longer
Than others*

Lime your land—
make money—lime
your neighbor's land.
We have the right
system.

Day Pulverizer Co. Knoxville, Tenn.

Winter Overhauling

The Winter affords a good opportunity to look over your Farm equipment, preparing for a season of continued service, and if at this time you see the need of a new Governor, do not wait until the last minute to order it, but give us details now, so that delivery can be effected at a time convenient for you to install.



Let us submit a proposition and tell you of others' experience, for this will involve no obligation as to eventual purchase, but reassure you in installing a "Pickering Ball Ranger."

This type requires no particular explanation, because of the wonderful showing it has made in the past twelve years that it has been on the market.

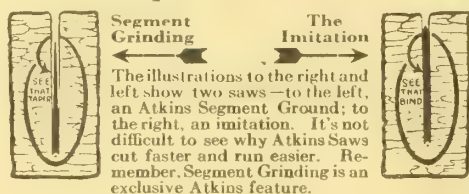
The Pickering Governor Co., Portland, Conn., U. S. A.

Mention The American Thresherman and Farm Power

ATKINS SILVER STEEL SAWS

Silver Steel, our exclusive formula; Segment Grinding, our exclusive patent; expert workmanship; and our patented processes, make the name **ATKINS** mean **SAW VALUE**

The farmer wants the saw that runs the fastest and cuts the easiest, that's why there are so many Atkins Silver Steel Saws on the farm today. Another reason is because Atkins Saws are Segment Ground, see explanation below.



E. C. Atkins & Company, Inc.

"The Silver Steel Saw People" Established 1857

Home Office and Factory, INDIANAPOLIS, INDIANA
Canadian Factory, Hamilton, Ontario
Machine Knife Factory, Lancaster, New York

Branches carrying complete stocks in the following cities:

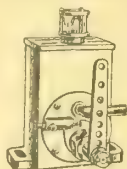
Atlanta
Chicago
Memphis
Minneapolis

New Orleans
New York City
Portland, Ore.
San Francisco

Seattle
Vancouver, B.C.
Sydney, N.S.W.
Paris, France

Mention The American Thresherman and Farm Power

Start the
New Year Right



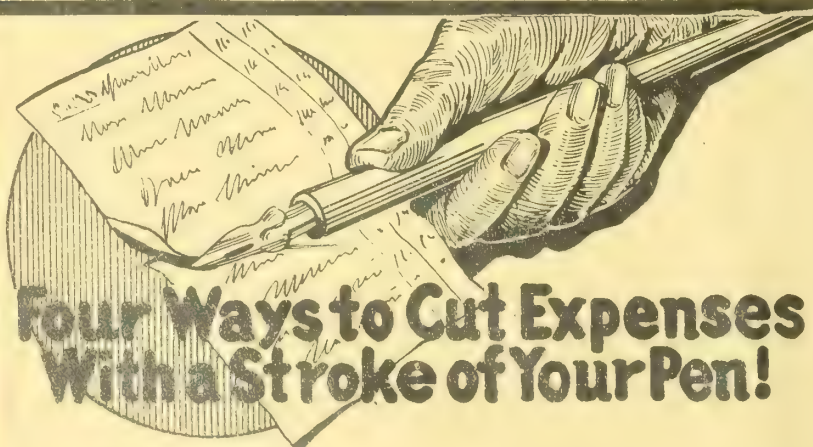
Oil Your
Engine Cylinders

with a **PRACTICAL SIGHT-FEED OIL PUMP**

and do away with unnecessary worry and expense. It feeds just the right amount of oil and does it regularly and positively in all kinds of weather—it eliminates guess work. "There's nothing for the engineer to forget or remember." Just keep the oil bowl filled and the pump does the rest. Nothing to freeze or burst—no draining to be done. Easy to attach with adjustable driving parts furnished. *Catalog A-66 yours for the asking*

MCCULLOUGH MFG. COMPANY MINNEAPOLIS, MINN.
Sold by the leading supply houses everywhere

Mention The American Thresherman and Farm Power



Four Ways to Cut Expenses With a Stroke of Your Pen!

Just take a postal card—write on it "Send me your free book for steam thresherman" and state the make and horsepower of your steam engine and whether double or single. We'll immediately send you, absolutely free and without obligation, our illustrated book which tells you how you can cut your repair bills way down—how you can make big savings in your oil, coal and water consumption—how you can increase the power of your engine from 15 to 30 per cent and thresh 200 to 300 more bushels per day without adding a dollar to your running expenses. Send the postal card *now*.

GOULD BALANCE VALVE COMPANY

300 Maple Street

KELLOGG, IOWA

Mention The American Thresherman and Farm Power

Asked and Answered

Question of N. H. What is the correct pressure or compression in pounds per square inch in a Ford engine?

Answer.—On the low grade fuels which we usually get now the compression in automobile cylinders should perhaps be a little lower than it used to be on high grade fuels. We should say that the compression in pounds should be between fifty and sixty pounds to the square inch.

It is very possible that if you test your Ford you will find that the pressure is somewhat less than this in your cylinders. Garage men here have found that the average of the cars which come to them show a compression pressure of about forty pounds, which is, of course, entirely too low for best efficiency. One Ford which we tested a short time ago, tested only thirty-five pounds to the square inch, and this car is running every day and giving good service except that perhaps it uses more fuel than it should.

Question of O. B. Can you explain to me so that I will understand it how electricity is made, how a jump spark coil is made and why it has three connections?

Answer.—Electricity is generated by cutting lines of magnetic force. If you have, for example, a horseshoe magnet, there are lines of magnetic force passing between the two poles of this magnet. If you pass a wire between these two poles you cut these lines of magnetic force and a current of electricity is generated in the wire. Of course, in the case of this small experiment, the current generated would be so very small that it would take a delicate electrical instrument to detect it. Exactly this same principle is made use of however, in the construction of all generators and magnetos. In the case of magnetos the magnets are permanent magnets such as horseshoe magnets are, but in the case of generators use is made of electro magnets in which current from the machine is passed around coils called the field winding of the generator and this current passing through these coils around soft iron cores turn these cores into strong magnets. After all, however, the basic principle of the generating of current is that you cut lines of magnetic force.

An induction coil is made up of two separate coils of wire insulated from each other. The primary circuit is made up of a comparatively small number of turns of rather coarse wire and outside of this is wound a large number of turns of very fine wire. When a current of electricity is passed through the primary circuit, a current of electric-

ity of much smaller amperage and much larger voltage is generated by induction in the other circuit.

Every induction coil really has four terminals, one for each end of the primary circuit and one for each end of the secondary circuit. It is true, however, that in practice the one side of the primary circuit is connected to the ground, that is, to some point on the engine frame, and that one side of the secondary circuit also is so connected. Therefore, in making the coils it is usual practice to connect one side of each of these circuits to one binding post and therefore on the outside of the completed coil you have only three connections. One connection is fastened to one end of the primary coil, one to one end of the secondary coil and the third connection is fastened to the other end of both the primary and secondary coils. This common connection is connected to some point on the engine frame, the connection to the primary circuit is connected to the batteries, and the connection for the secondary circuit is connected to the spark plug.

Question of L. L. Please explain how horse power is measured. What is meant by pre-ignition?

Answer.—Horse power is measured by means of a dynamometer or a prony brake. In the prony brake we have a lever, one end of which is attached to a wooden form which clamps around the band wheel of the tractor. The other end of this lever, which is of an exactly known length, rests on a scale. With the engine running, the end which clamps around the belt wheel of the tractor is slowly tightened until the friction is sufficient to put full load on the tractor. Frequent readings of speed are taken with an accurate speed indicator, so that at the completion of the test one knows the revolutions per minute of the belt wheel, the length of the lever arm attached to the wheel and the average pressure which was exerted at the end of this lever. From this data it is possible to figure the horse power developed during the test.

Elaborate dynamometers are some times used in place of this rather slow method of using the prony brake.

In measuring the drawbar horse power, some sort of dynamometer is used. In fact, this dynamometer is a sort of spring scale connected between the engine and its load, which gives the number of pounds pull developed. Knowing the number of pounds pull and the speed at which the machine is traveling, it is easy to figure the drawbar horse power produced. By putting suffi-

cient load on the tractor so that it is working at its maximum capacity, you get the drawbar horse power which it is possible for the machine to develop.

There is a certain point in the cycle of a gas engine when ignition should take place. If for any reason ignition takes place earlier in the cycle than this, we have pre-ignition. If the cylinder is quite dirty with a carbon deposit there may be enough heat generated in the cylinder to cause particles of the carbon to remain incandescent from one explosion stroke to the next. When this is the case, it is not at all unusual for the charge of gas to be exploded before it should be causing pre-ignition.

Question of C. V. I have a car which has been troubling me through lack of power. There seems to be plenty of compression, the motor will not run at a very low speed, and the throttle has to be kept closed when starting even in many cases when the motor is hot.

Some time ago I saw in the Correspondence Department of the Tractor and Gas Engine Review a letter in which someone told of repairing a wrist pin bushing by ripping the brass bushing open on one side with a hack saw and compressing it, putting shims between the piston and the bushing so as to hold it compressed. Do you recommend this sort of repair job?

Answer.—It would seem from your letter that probably your carburetor has gotten out of adjustment so that you are getting too rich a mixture. This would cause all of the things to happen which you mention in your letter.

We do not consider that it would be very good practice for persons to repair wrist pin bushings to fit the worn wrist pins as described by one of our correspondents and commented on by you in your letter. Of course, inasmuch as the wrist bushing and pin will have to be discarded anyhow when new ones are put in, it is not very likely that such a repair would do any noticeable damage, and if well done it doubtless would give fair service for a short time. We do not see, however, how it would be practicable to get a perfect bearing fit on this sort of a repair job. In the first place, you would have to have a new wrist pin that was not worn in order to get a perfect fit and then one would find it quite difficult to get the brass bushing perfectly round on the inside after ripping it open on one side and compressing it.

A person who is too nice an observer of the business of the crowd, like one who is too curious in observing the labor of the bees, will often be stung for his curiosity.—*Pope.*



"I Wonder How She'll Start"

IT'S bitter cold. The snow crunches crisp at every step. Everything seems frozen into one solid piece—especially the tractor, which has been idle for hours—or even days.

"Turning her over" may be next to impossible, unless you are using the proper grade of oil.

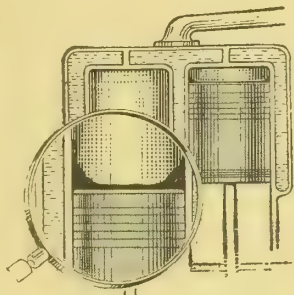
TEXACO TRACTOL is manufactured in three grades to meet the climatic and mechanical conditions for all tractor engines, whether using kerosene or gasoline for fuel. It is refined especially for tractor engines, and its use minimizes crank-case dilution. It burns clean without excessive carbon deposits. It is *not* automobile oil,

for tractors operate under extremes of temperature and pressure too severe for Auto Oil.

All operating conditions have been considered in making up the TEXACO Chart, which should be consulted and recommendations followed to secure best results.

TEXACO TRACTOL comes in 33 and 55 gallon steel drums, wooden barrels, and half barrels, and five gallon sealed cans.

Ask your TEXACO dealer what grade of TEXACO TRACTOL your tractor needs. He'll know. Then try it. You'll see a difference right away—and later when you overhaul your tractor.



In freezing weather the piston must really plow its way through oil that has congealed

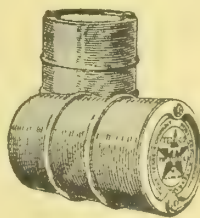
THE TEXAS COMPANY

Petroleum and its Products

General Offices: Houston, Texas

Offices in Principal Cities

TEXACO MOTOR OIL THUBAN COMPOUND HARVESTER OIL AXLE GREASE

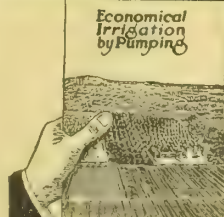


TEXACO

TRACTOL

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest references. Prompt service. Reasonable terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.

How to Increase Your Crops And save them from drought! every year.



THIS BOOK TELLS HOW
Sent Free
Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures Crops, especially POTATOES.

THE AMERICAN WELL WORKS
General Office & Works: Dept. 12, Aurora, Ill.
Chicago Office: First National Bank Building

One Man Saws 40 Cords a Day

At a Cost of 1 1/2 c a Cord!
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In 1892 the first Case Gas Tractor was built.

Threshermen everywhere are now applying their Case Steam or Gas Tractors to profitable heavy-duty farm or road work, making them income producers the year round.

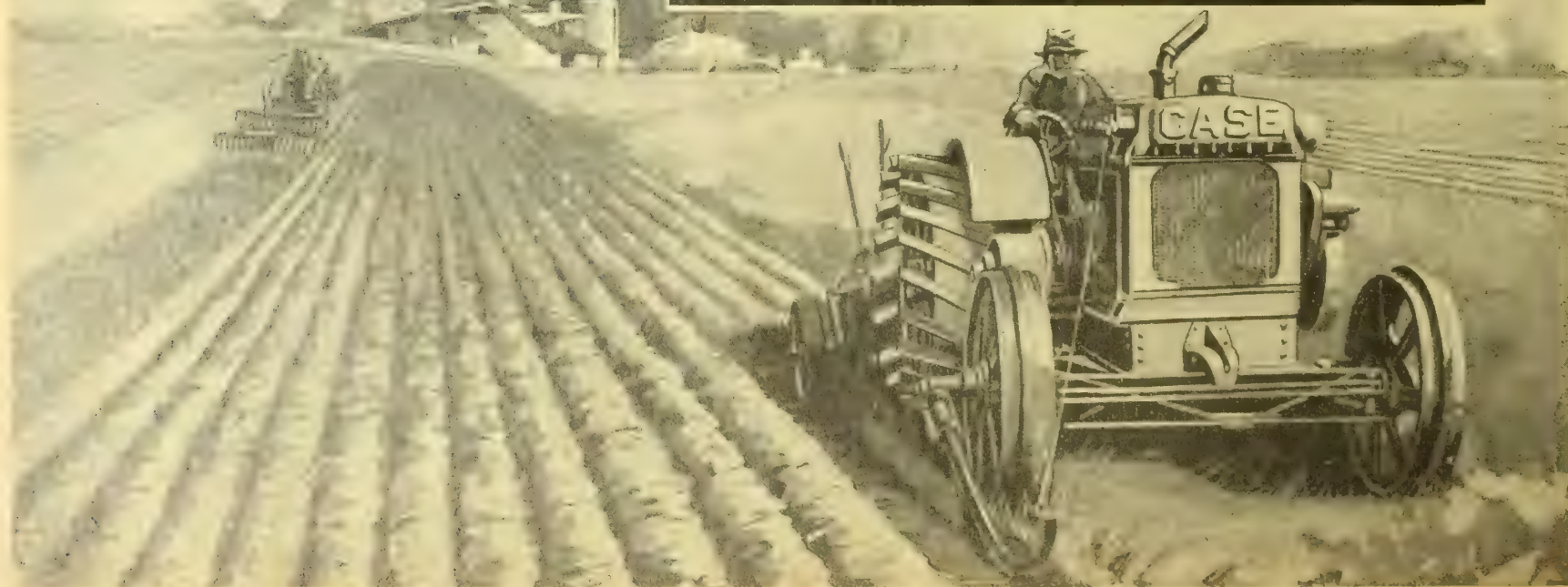
Taking into account the many thousands of Case Tractors in use today, their combined plowing capacity would enable them to plow a continent.

Nevertheless, considering Case pioneer experience and continuous development, **Case Tractors have just begun.**

J. I. Case Threshing Machine Company
Dept. B451 - Racine, - Wisconsin

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SINCE 1842 Case Threshers have been busy in the grain fields of the world. From the very first, Case Threshers have proved to be both necessary and invaluable.

Threshermen the world over, with the aid of these efficient threshers, have performed work equivalent to filling a veritable city of giant elevators with clean threshed grain.

Case Threshing Machines have long been recognized for clean threshing, thorough separation, and unequaled saving.

The Case steel construction assures rigidity and long life. It prevents rotting and total destruction by fire. It guards against distorted frames and disalignment of shafts and bearings from the weight and pull of main drive belts. The galvanizing prevents rust.

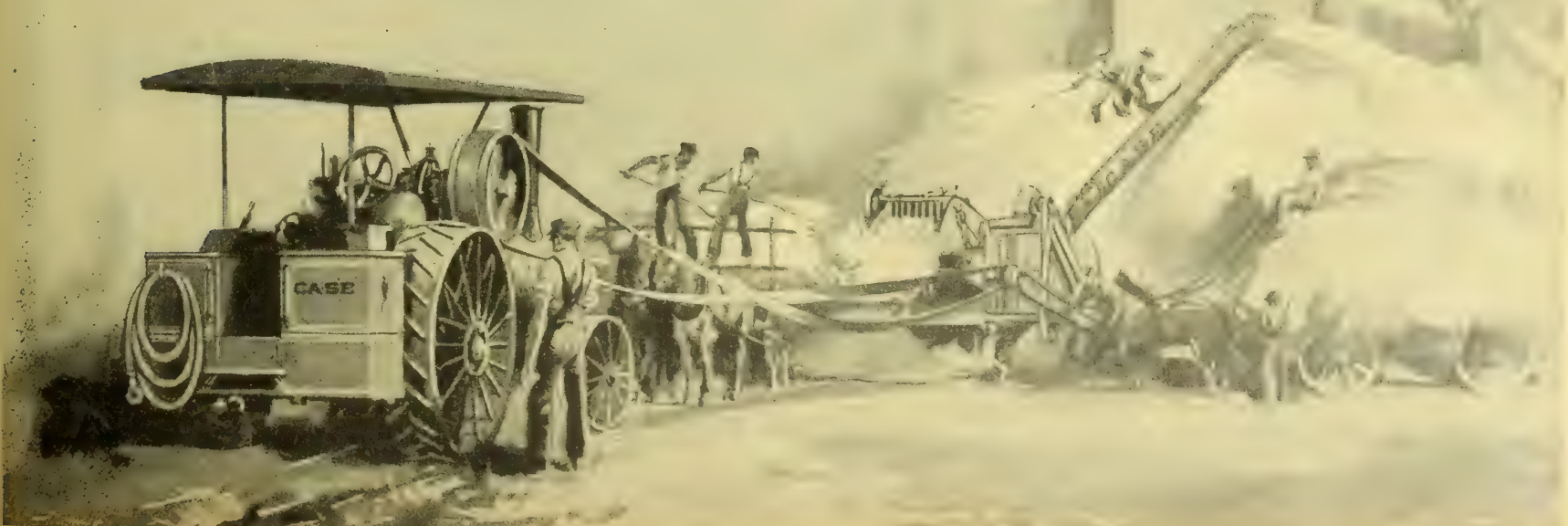
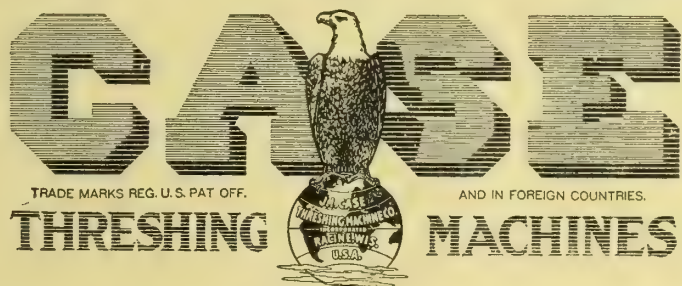
Case Threshers assure to threshermen everywhere, a successful run year after year.

These are but a few reasons why the man who makes a business of threshing will do well to investigate the merits of Case Threshing Machinery.

With a wonderful record of achievement behind them, **Case Threshers have just begun.**

J. I. Case Threshing Machine Company

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Illustration: The American Thresherman and Farm Power

Uncle Silas

THERE are tricks in all trades. Even the real clairvoyant will tell you that they have horse jockeys and side-show barkers in the spirit business.

THERE is nothing in the world like love, but when a fellow begins telling his best girl that she seems like a splinter of starlight sent to string the dewdrops of his heart into a rope of pearls, it's time to wind the clock, Ezra.

WHEN those boot-leggers ask you fifty dollars a gallon for "rot-gut" that would make the rag weeds bloom in Paradise, you know that they are getting close to the bottom of the barrel, Old Timer.

THERE were two great landslides during the year 1920, the first occurring in the United States on November 2 and the other in the Alps a little later when Mount Blanc, like the United States, made a record breaking smash.

IF, in your plodding along the highway of the present, the roses of righteousness begin to smell like the dog-fennel of despair, it's a ten to one shot that you are bilious and your tripe needs attention.

NO, Ezra, these are the days when every tub must stand on its own bottom. Folks are not spreading the warm comfort of love over the feather beds of the universe at this writing, so you can notice it.

WHILE none of us are particularly anxious to test the truth of the claim as long as we can hang on by an eye-lash, those who pretend to know tell us that the approach to the future life is like floating away in a sweet dream of perfect bliss. Just how they know, dependant sayeth not.

CHRISTMAS trees filled with beautiful presents that all go to others may cause a glorious feeling to the recipients but they make a poor hungry orphan boy, who watches the crop gathered without receiving a nudge his way, slobber like a poor hound at a sausage mill, for I've tried it on.

AFTER folks have got through singing, "Solemn strikes the funeral chime," it won't matter much whether they lower you into the grave with the latest automatic noiseless device or by the use of plow-lines, like we used in the good old days. The question before the house that interests you on this occasion is, where you are headed for.

IT is a source of satisfaction to the Christian believer that at last the birthplace, the place of the crucifixion and the place from whence the Gentle Nazarene ascended into glory after his resurrection, are no more to be used by the infamous Saracen as sources of revenue to be exacted from those who journey hither to pay their devotions at the holy shiner.

WHEN you are all tired out like a jaded horse, after a hard day's drive, and you pull up to your neighbor's house on a cold winter night to pass an hour away, along with a few chips of friendship, to have him bring out a thin glass with hot water, plenty of sugar and just enough of what used to be known among us professional druggists as "twenty-year-old," seems like the resurrected dream of your sweetheart's first kiss, in these days of drouth and the hard, flinty soul of Uncle Sam's prohibition minions.

YOU'LL find the elixir of life in healthy exercise, honesty of purpose in your work, and in being charitable towards all mankind in a greater degree than in taking patent medicines which are warranted to cure forty-nine diseases when you have only one. There's lots more of sustaining grace in a turkish bath than in all the springs warranted to contain the fountain of youth. "Monkey glands" may furnish the desire, but it takes the power of endurance to back 'em up.

I'VE lived through many trials and tribulations and have taken oil and turpentine in my childhood days just to please an ignorant aristocracy of home-brew doctors. I've given of my substance to others when the high sign floated from their mast heads and their tongues lolled out, but when a "dam nigger" digs down into the catacombs of my private stock and licks up the last three quarts of the sustenance that remained to remind one of a once fertile oasis which is now an arid desert, and then leaves the straw sticking in the jug, it is only by a mighty effort that I restrain myself from converting this minion of the Fourteenth Amendment to the Constitution into fertilizer, for of a truth he deserveth a bonfire.

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ROLLER BEARINGS

In 1921 Farm Work

IN 1921 on American farms, more than ever before, must it be made possible for one man to accomplish more work—for an acre to produce more crops.

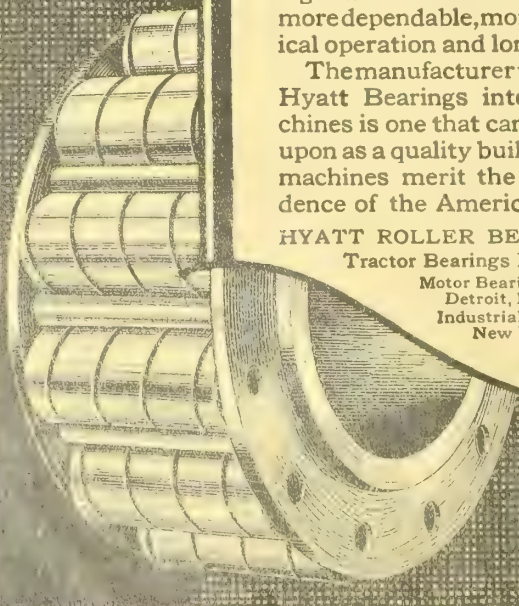
High priced land and high priced labor are but two of the things that are making this necessary.

Labor-saving and time-saving farm machinery is going to help in a very large degree to solve this problem.

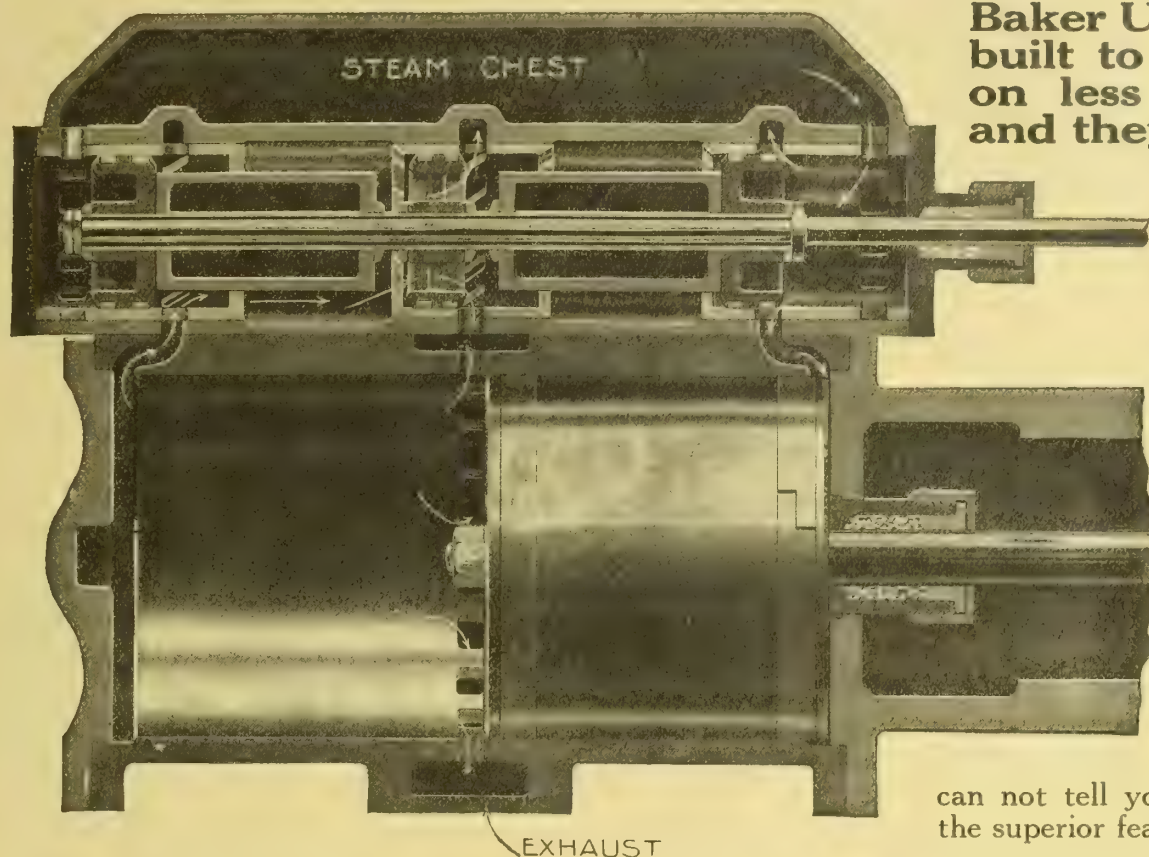
The use of Hyatt Roller Bearings in farm machinery makes for more dependable, more economical operation and longer life.

The manufacturer who builds Hyatt Bearings into his machines is one that can be looked upon as a quality builder, whose machines merit the full confidence of the American farmer.

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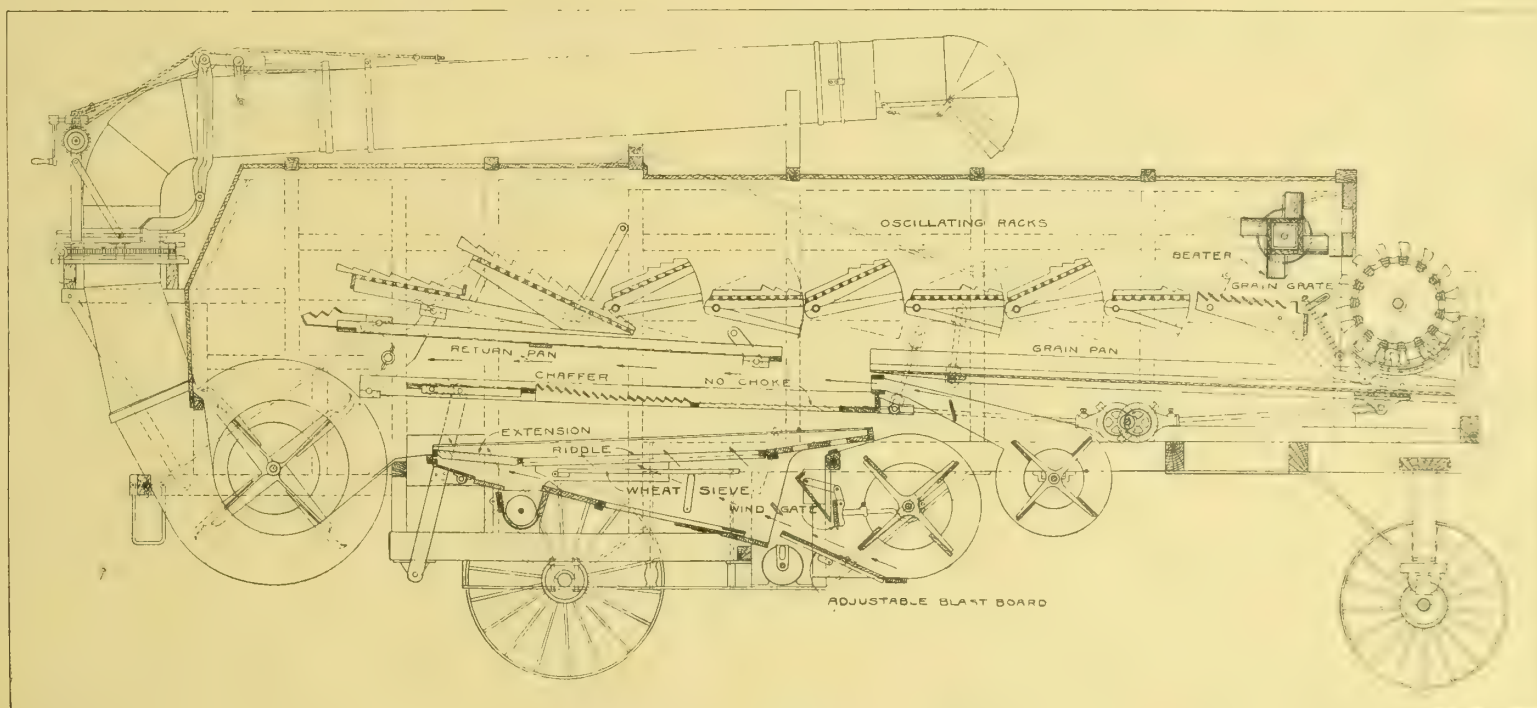
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Agents wanted

Mention The American Thresherman and Farm Power

Correspondence

I have been reading your articles on threshing costs. I am a Nebraska "one ring" thresher with a 20-40 gas tractor and a 30x50 separator with feeder and wind stacker. I don't agree with Rube Lien about steam and gas. I have threshed five years with steam and two with gas. I find that with gas a man can start up for just a small job, while with steam it is very expensive. In our state we are sometimes bothered with rain and bad weather, also in moving. With gas I can move myself without any help, early or late. We don't have to wait for the water tank. Some say it takes more money to keep up a gas tractor. I think it will cost a little more for repairs but you can save the price of water tank, team and one man, also on the wages of an engineer. They paid steam engineers from twelve dollars to fifteen dollars per day this year. I paid eight dollars for my engineer. I run my own separator. Another point worth remembering is:—the oil man will deliver your gas and it is easier to handle than coal. I run the only gas tractor of any size in this county, and yet I thresh more per day than lots of steam rigs of larger size. Below I will give a table of my charges for threshing.

Wheat.....	12 cents
Barley.....	10 "
Oats.....	8 "

My run averaged me about ten and seven-eighths cents a bushel. I will send a picture of my rig in action. Cost of threshing per bushel for 1920 with gas traction:

Fuel.....	\$.0155
Engineer.....	.0080
Repairs.....	.0090
Oil.....	.0012
Insurance.....	.0010
Depreciation.....	.0190
Separator Man.....	.0114
	.0651

We have about half bound grain and half headed; the cost would be much lower on headed grain.

Alma, Nebr. G. D. BAKER.

(Editor's Note: A picture of Mr. Baker's rig will appear in an early issue.)

I run a farm of one hundred and thirty acres and have been in the threshing business for six years. I own a Russell 16-horse power engine, and a 30x50 separator; an Advance 12-horse power engine, six roll McCormick shredder, and an Ann Arbor power hay press.

I had a good run this year. We started on July 20 and have just finished the grain "Red Top," which is our largest run, will last until cold weather. We charge four cents for oats, eight cents for wheat, ten cents for rye and twenty for clover.

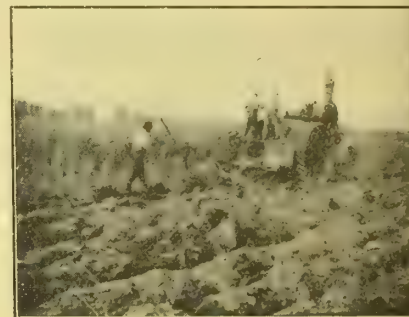
With my Russell engine I have been pulling the graders for the township for the last three years. It sure is some puller. We pull an eight-

foot grader as deep as they care to run it, then drag it in, along with a double grader having a thirty-two-foot reach.

Noble, Ill. GRANT BILLINGS.

I have been a thresherman for twenty years. I have a 22-horse power Advance engine and a 36x56 Nichols & Shepard separator with wings and wind stacker. I get five cents for oats, five cents for barley, seven cents for wheat and rye and fifteen cents for flax.

I also have a No. 1 Birdsell clover huller and an Enterprise sawmill. I get five dollars per thousand feet for



Peter Tretter and His Boys.

soft wood and six dollars per thousand feet for hard wood. I think this is a fair price.

I am sending you a picture of my two boys and myself breaking with a John Deere Jumbo twenty-four-inch plow. The land is very stony and stumpy. We got eight dollars per acre for breaking this land of about twenty acres. We averaged three acres a day.

Pierz, Minn. PETER TRETTER.

My father and I own and operate an Avery 36x60 separator, Garden City feeder, Minneapolis 22-horse power engine, and an Ottawa sheller. We pull hedge and fill s'los, and do almost every kind of work with the engine.

The runs in this locality are getting quite small, and the small machines are getting quite popular. This year we had a run of nine hundred acres, and generally shell about one hundred thousand bushels of corn per year.

We get two and one-half cents per bushel for oats, six cents for wheat, and one and one-half cents per bushel for shelling. We get three dollars and a half per hour for pulling hedge and two dollars and a half per hour for filling silos. I don't think we receive enough for threshing and shelling, compared to some in different parts of the state.

I wish to renew my subscription to The American Thresherman and Farm Power, from which I get a lot of valuable information.

CLIFFORD N. HOFFMAN.

Dwight, Ill.



Elmer Anderson, Kimball, Nebraska, Does All His Own Repairing.

I have been a thresherman for fourteen years. I own an Aultman & Taylor outfit. I also have a plowing outfit. I am sending you a picture of my threshing rig. I do all my own repair work. I have just finished a thirty by forty-four machine shed for my machinery and in that I have a shop where I do my repair work.

I have had quite a little experience with steam, gas and coal oil engines. I have found that all tractors need plenty of good lubricating oil. The valves must be kept timed, and I find that a person wants a good magneto with an impulse starter on it to make an engine start easily.

I find that the best way to start an engine in cold weather is to heat a little gas in a common oil can and prime it.

ELMER ANDERSON.

Kimball, Nebr.

At present I am operating two rigs. One is an 80-horse power Case engine and a 40x62 Case separator, and the other one is a 16-horse power Garr-Scott engine and a 28x48 Avery separator. I also have a 20-40 Case tractor which I use on a No. 1 Birdsell clover huller. This makes a fine outfit for that kind of work. I have a Success shredder, a No. 17 Ohio ensilage cutter, and a No. 2A Western corn sheller.

I get three and one-half cents for oats; four cents for barley; six cents for rye; eight cents for wheat; fifty cents for timothy; two dollars and fifty cents for clover; four cents for shelling corn and three dollars and fifty cents an hour for grading. I consider these prices a living price for

the thresherman at the present prices of all small grains. We are not bothered with price cutters in this locality.

CLARENCE F. SCHMOLL.

Osko, Ill.

I started to farm for myself only two years ago, and I have not yet been able to get things as I should like to have them. We have it pretty handy here, as we are only about a mile from a loading switch and do not have to make any long hauls.

I am somewhat familiar with what trucks will do, as there are lots of them here that haul oil field supplies. They range in size from one to five tons.

I have followed threshing for nine seasons as a separator tender. I like the work very well. I do not own a machine myself, but work for others.

EARL C. BOWERS.

Independence, Kans.

I own a grist mill and a 15-horse power Peerless Geiser traction engine, which I use for filling silos and other work.

I like steam better than oil engines for heavy loads. I find the Peerless class "S" a very good engine for pulling loads over rough roads, as it is easy to handle and the spring gearing places it in a class by itself. The roads in this part of the country are quite rough and hilly and the bridges are fairly good, excepting the smaller ones, which are not dangerous as the water is quite shallow.

Midland, Va. E. H. BOWER.



One of the Two Rigs Operated by Clarence F. Schmoll, Osko, Illinois.



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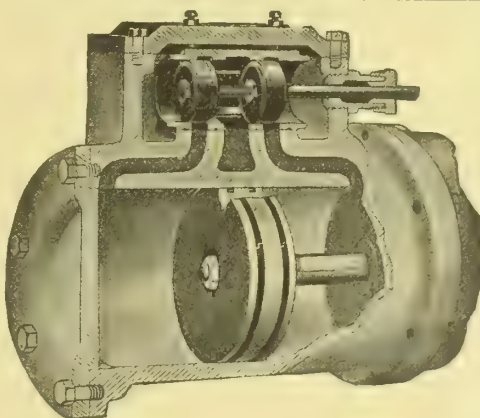
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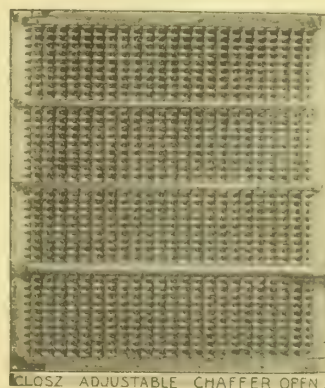
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Hiawatha and His Brothers

BY FRANK M. CHASE
(Continued from December Issue.)

"If you don't test your seed corn this spring," she concluded, "there will be no reason for it except your natural stubbornness. You needn't balk at it just because you think that you'll be the only one around here to do it. Mark Bonner has already had the county agent show him how, and Kate Miller said this afternoon she was going to speak to Joe about testing his corn. They'll all be doing it pretty soon, and if you don't look out you will be the only farmer in the neighborhood having to plant his corn over."

William by this time was not disposed to argue the matter. Two or three days later there was evidence of his complete conversion to the idea. While on an errand to a neighbor's he met Miss Powell as she was coming from school.

"Some of us farmers would like to test our seed corn this spring," he said, "like the boys are doing at school. Most of us don't know much about the work, and we'd appreciate it if you could show us how some day."

Mary could scarcely conceal her surprise. She had not dreamed that the magic of the eight rag dolls could work so rapidly, but she did not forget her larger purpose.

"Thanks for the compliment," replied the teacher, "but really I know very little about testing seed corn—only what Mr. Stevens told us one afternoon. Some of the older boys could test the seed corn for the neighborhood, but I'd rather they would not. You see, I am organizing them into a seed corn growing club, and they already are quite busy with their own work."

"Why don't you farmers who are interested hold a meeting and invite Mr. Stevens to give you a special demonstration? Such a meeting could be held in the schoolhouse and you, as president of the school board, might easily arrange for it."

"Do you think Stevens would come for us Bonner Corners fellows? We haven't had much to do with him, you know," said Foster, whose suspicion of the county agent had not yet fully disappeared.

"Of course he'll come," Mary replied, "if you ask him. But naturally he doesn't visit farmers who don't want to see him."

"Then I'll call him up tonight and arrange a meeting for next Friday night, if he can come," said Foster, continuing on his way.

The better seed corn meeting was a complete success. Foster was a leader among his neighbors, and his influence, coupled with the children's missionary work, brought out every Bonner Corners farmer. They also

came in a receptive mood, so that Stevens' suggestions fell on willing ears. Within the next week a bunch of muslin rolls, or a germination box behind the kitchen stove, was to be found in every one of these farmers' homes.

Acceptance of the county agent's services by the Bonner Corners farmers gave Stevens' work a foothold in the community, and soon he was making frequent trips among them. Meanwhile the organization of Miss Powell's seed corn club was proceeding apace, and as she had asked the county agent's assistance in carrying out the project he often found it convenient to stop at the school when in that vicinity. As the spring days rolled by these informal visits became increasingly frequent, especially if Stevens could find a convenient excuse for dropping in near the close of the school day, so that he could take Mary to her rooming place in his car or possibly for a ride as he went about some errand of the day's work. Mary and Stevens were great favorites among the Bonner Corners folks by this time. All had noticed the growing friendship between the two, so that the farmers were never surprised to receive an afternoon call from both of them. As one farmer told Stevens: "The only time that we are happier than usual to see you is when you bring Miss Powell along, too."

On one of these happy rides Stevens stopped his car at the crest of a hill overlooking Bonner Corners. Spring was in its full glory. Here and there among the green and brown fields of the valley a farmer was working late to finish planting his carefully tested corn. Life seemed everywhere—in the green of the trees, in the fresh, lush pastures, in the musical far-floating sounds of the farm; while the long shadows of the lowering sun seemed to cast an air of enchantment over it all.

"Isn't it wonderful, just to be alive in planting time!" exclaimed Mary, as the two gazed upon the scene before them. "I seldom think of this season as spring. It always seems to me as the beginning of new things, so I like better to call it planting time."

"You are right; planting time is wonderful," Stevens agreed, "and this year you have made it more wonderful than ever to me. It has been planting time with you, too, and Bonner Corners already is reaping some of the harvest. When I used to drive over this hill last year the sight of those fine farms down there always filled me with regret; those farmers could have done so much better, if only they had been a little

more progressive. But everything is different now. In a few years Bonner Corners will be one of the best farming districts in the county, and to you belongs the credit for the change."

"Did I really help—you—a little?" Mary asked hesitantly. "I'm so glad, if I did."

"Yes, Mary, you've made all the difference in the world." It was the first time that Stevens had called her Mary, but she did not object. Neither did she remove her hand as his large palm closed softly about it.

When the school year closed Miss Powell left to take some work at the state normal university. Before going away she turned over the supervision of the seed corn plots to the county agent, asking him to give the boys whatever assistance he could. Stevens made the most of this opportunity. He was well aware that through these boys lay one of his best means of reaching their fathers and mothers. Because of Mary's interest in this work he also regarded her charge as a sacred duty. Thus his frequent trips to Bonner Corners continued during the summer, and daily he became more popular with its residents.

Mary's absence was felt keenly. "It seems as if half the neighbors are gone when Miss Powell isn't here," Mrs. Miller said while Stevens was having dinner with the family one day. And long before the summer vacation was over the young folks were wishing for the return of the teacher who had made school so interesting to them.

Through their exchange of letters Stevens had kept Mary informed of the progress of the seed corn club. Only once was she able to visit Bonner Corners during the vacation. This was the Sunday following the end of the normal school course, when Stevens drove to her home in an adjoining county and motored with her among the friends with whom they had worked together.

"Until we received your signed contract the school board was rather frightened lest Stevens had taken away our teacher," William Foster told Mary with a twinkle in his eye; "but we are all mighty glad you're coming back."

Everywhere Mary received the same glad welcome. The school children whom they met clung about her, while the boys with the corn plots insisted upon showing the results of their plantings. It was a happy day for Mary and Stevens. As they formed the center of an admiring group or walked down the rows of some boy's corn, their pleasure with each other's company and with the reception being given them, was plainly evident. And they made no attempt to conceal it.

Encouraged by the success of her seed corn work in the spring and by

the farmers' appreciation of her efforts, Mary entered into her school work that fall with new enthusiasm. The old-time drudgery of teaching as gone. She now had a new and broader view of her work. Instead of being a mere cog in the life of the community, her school had been transformed into a dynamo giving direction to it.

Among her first plans for the new year's work was a fall festival. This was to be held at the schoolhouse soon after corn harvest. The boys' corn plots had been very successful, and Mary perceived that by giving samples of the corn from these plots judged at a local exhibition, important lessons in seed selection could be driven home. The success of the spring seed corn testing had been written all summer in the perfect stands of corn, and as the harvest season approached it was certain that the farmers were to reap an unusual crop. Now they realized more clearly than ever their indebtedness to Mary, and they aided her plans for the harvest festival in a true spirit of thanksgiving—thankful for their teacher's helpful work.

The fall festival marked a new kind of event for Bonner Corners, and it was astir early. Though it was a holiday for the school children, most of them were at the schoolhouse before the usual time; running errands, helping Mary and Stevens with the exhibits and decorations and speculating as to whose corn would win the blue ribbon. For weeks they had lived in eager anticipation of the day, and their enthusiasm was at the overflow point.

Following the vanguard of children came the women of the neighborhood with well-filled baskets, who immediately engaged in preparing dinner. Meanwhile the building was cluttered with the regalia of harvest time. Soon the men, the morning chores out of the way, began to arrive; and by noon the aroma of hot coffee rising from the basement announced that the feast might begin.

After the meal an expert from the state agricultural college judged the exhibits of corn. These were arranged in neat pyramids upon tables along one side of the schoolroom. On the wall above them, made with ears of colored corn, was the quotation from Hiawatha:

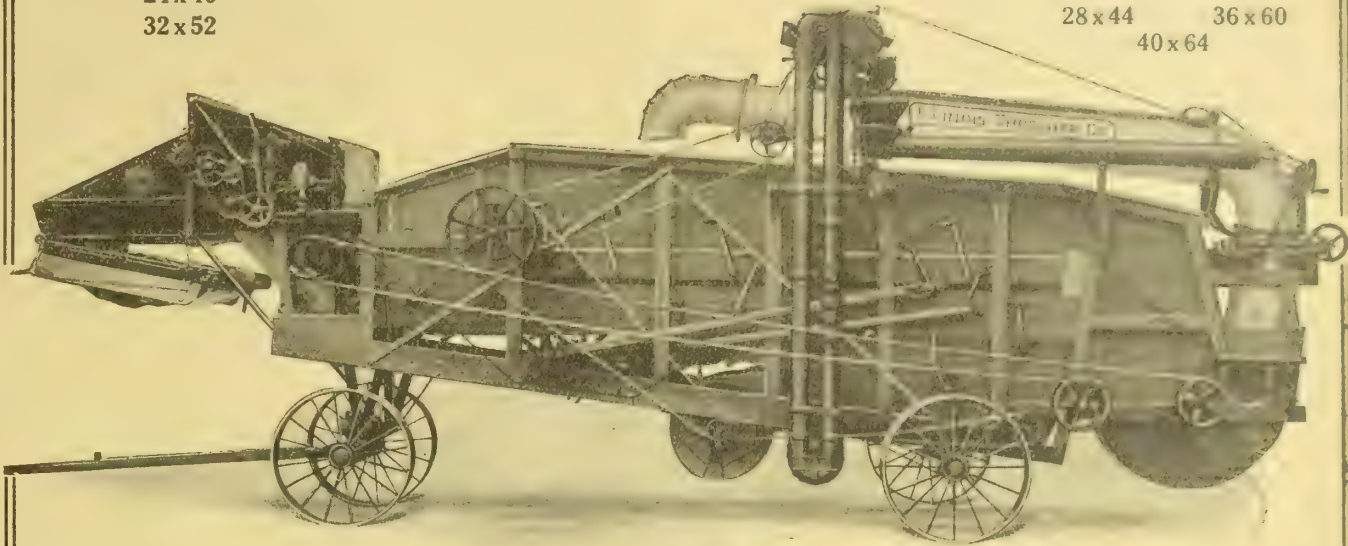
"But for profit of the people,
For advantage of the nations."
In his address that afternoon, the corn expert called attention to the quotation. "If Hiawatha was living today he would make a good farmer," he said, "because he had the vision of service to humanity."

A little later a domestic science lecturer told the farmers how they might serve humanity in their own homes. "Inasmuch as it was a woman who helped you to grow a better crop of corn this year," she said, "you can well afford to spend a

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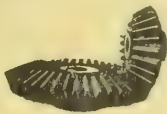
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part of the returns from it in a way that will lighten the hard work of the women folks." Whereupon was sown the seed which soon resulted in the installation of numerous water systems and electric lighting plants in Bonner Corners homes.

In the evening Miss Powell's pupils gave a program of music and readings. There was also a pantomime of Hiawatha's wrestling with Mondamin, accompanied by the reading of appropriate selections from the legend. But no part of the day's events aroused greater interest than the husking contest with which the festival closed. Two large baskets of unhusked ear corn were brought in and dumped in separate piles.

"Nominations are now in order for two men to compete in the husking contest," jovially announced William Foster, who, at Mary's request, presided.

"I nominate Ralph Stevens, the county agent," Joe Miller said, smiling. "We've found out this summer that he is pretty good at telling us how to raise better corn. Now let's see if he can husk it as well." A dozen seconds quickly followed, and Stevens was chosen.

"Now who is going to uphold the honor of Bonner Corners?" Foster asked. "We want the best husker in the neighborhood, because Mr. Stevens might surprise us."

"Then you want Mark Bonner," spoke up Bill Hawkins. "I never knew a man to husk more corn in ten hours than Mark can in eight."

The choice was unanimous. Foster was made judge of the contest, and the husking commenced. The hands of the huskers flew rapidly. At times the air seemed almost filled with flying husks, while the tattoo of the shucked ears on the bare floor marked the progress of the match.

"Go it, Mark! Go it, Mark!" came the cries of the older farmers, who were ardently backing their champion; while the schoolboys and younger men urged the county agent on no less vociferously with "Beat him, Steve! Beat him, Steve!"

But Stevens could not beat the champion corn husker of Bonner Corners. Just as the county agent reached for his last ear, Mark held his hands above his head to signal that he was through; while Stevens, too occupied to notice his defeat, tore the husk off his remaining ear. It was filled with blood red kernels.

In the uproar among the old farmers that followed Bonner's victory, it was several moments before Foster could obtain the attention of the crowd.

"You old fellows oughtn't to crow so loud as you are doing," he was finally able to say. "While I am willing to admit that Mark shucked his corn the quickest, I am going to declare Ralph Stevens the real winner. He has found the red ear, and

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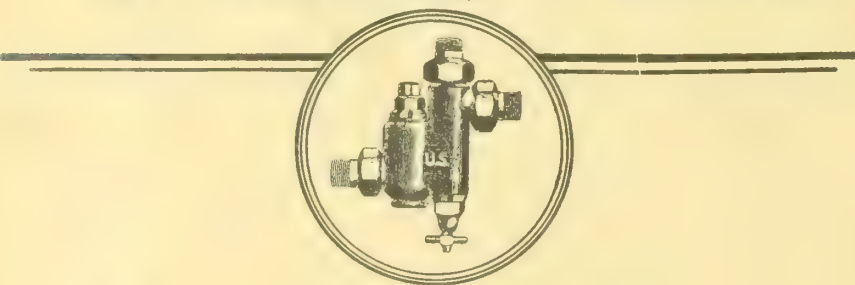
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thereby wins the undisputed right to see the teacher home."

It was the young people's turn to laugh, and they did so wholeheartedly. Mary laughed with them, though her smile failed utterly to hide the crimson in her cheeks.

A half-hour later, the festival over, only she and Stevens remained at the schoolhouse, busied with putting out the lights and locking the building for the night. Finally, the last door secured, they stepped out into the autumn moonlight. There was no self-consciousness now. They were plain Ralph and Mary, caring naught for the jests of the neighborhood. For a quiet moment they stood together at the entrance. Then, taking Mary's hand in his, Ralph spoke first.

"This has been a great day for Bonner Corners, Mary, and for me," he said. "You have done just the thing for a community that I have always wanted to do. It is like a dream come true, and I am very proud because it was you who did it."

"I am glad you think so, Ralph," Mary replied, "but I didn't know I was doing much. I only wanted to help you, and this seemed so little. Next year—"

But Mary got no further. Stevens' arms were about her. "You do love me," he said softly, "don't you dear?"

"Yes, dear" said Mary. "I do. I have loved you, Ralph, ever since planting time."

One of the most complete and practical books on electroplating and allied processes that have been published as a text for the student or professional plater is "The Modern Electroplater" by Kenneth M. Coggeshall, which is published by the Norman W. Henley Publishing Company, New York City, New York, and sells for three dollars. This book is written in simple language and explains all the details of electroplating in a concise and yet a complete manner. It starts at the beginning and gives an elementary outline of electricity and chemistry as relating to plating, then considers shop layout and equipment and gives all the necessary information as to reliable and profitable electroplating in a modern commercial manner. Full instructions are given for the preparation and finishing of the work, and formulas and complete directions are included for making all kinds of plating solutions. The farm boy who wishes to do some experimental work in electroplating will find this book very interesting and helpful.

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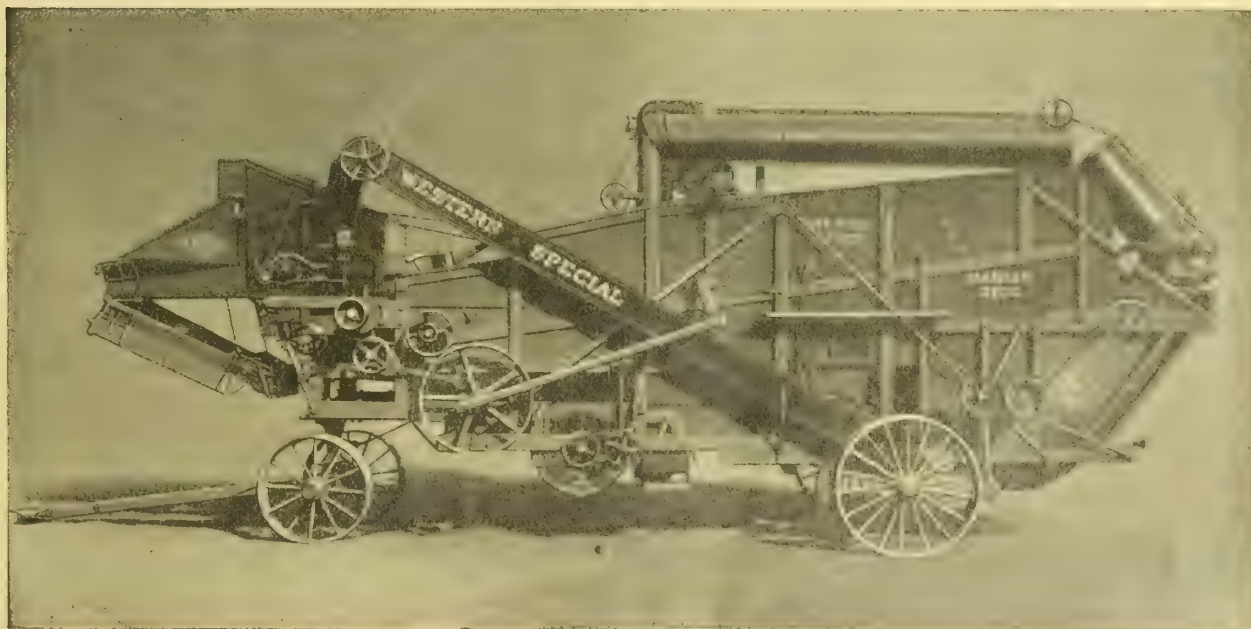
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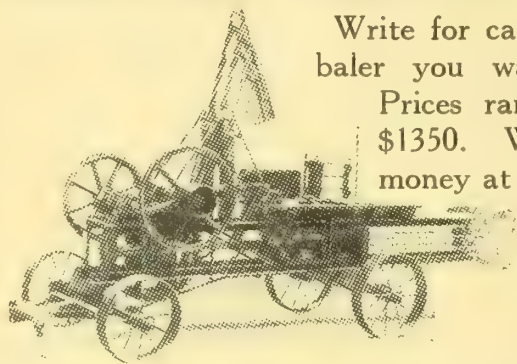
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Women's Department

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Good Will Good Thoughts Good Action
 Truth
Affection (freely expressed)
 Charity (in thought and word)
 Unselfishness
 Sweet Memories

The "Leaf" Mother Tucker Turned

BY MOTHER TUCKER HERSELF

I.

While I was "resolving," this New Year's Day (for though I have seen a goodly number of New Years' Days come and go, I still have faith in myself to "resolve,") I resolved to tell you of the "leaf" I turned a year ago today. I haven't mentioned it before, lest someone should knowingly smile and say:

"Better wait a spell, Mother Tucker, and see how your resolution holds out!"

But I reckon a year is a fairly good test of a "resolve" and so I am ready to look you all straight in the eyes and tell you about it.

Some of you who know the "Tuckers" won't need the "setting" that follows, so you may just skip this paragraph. But for those who live in another part of the country and have never heard of us, I will remark we have a reputation of being what we countrypeople mean when we say "well off." Tuckers have been farmers for generations. By that I mean, some of them have. Of course in the different branches of the family there have grown up lawyers, doctors, city business men and a goodly scattering of preachers. But there has always been at least one son, in every family, that has had the good judgment to stick to the old farm, until, in some cases, farms have been handed down and run by the same family for generations.

Another evidence of the good, hard sense of the Tuckers is the fact that they never, so far as I recall, have attempted to thrust one generation upon another. No "in-laws" trouble for them. They avoid them before they begin. So when our farmer son decided he wanted to marry and wanted to marry a city girl, father and I just selected a cozy little home in a place we had decided on years before and left the management of the old place to the young folks, as our fathers and mothers, in turn, had left us free to hew our own paths.

I will own that I had a much keener realization of certain misgivings and pangs, that beset elders when they turn the reins over to younger and less experienced hands, after I had washed the dishes for the last time, on the old kitchen table, where father's mother and her mother and grandmother had washed dishes. But I reminded myself that

Providence must have confidence in young and untried things, else why should we be called to lay down this mortal life, just when we have attained wisdom that comes from years and experience? So I smiled and joked, in spite of the lump in my throat and the hurt in my heart and pretended to daughter-in-law that was glad some one else was going to have to watch the water pail, to see it was filled before the men went off to work, or the wash tubs were emptied or the wood-box replenished.

"Of course," I said, "son will mean to attend to all those jobs regularly, and he probably will remember to do so for a time. But unless he is more than human, and I being his mother, warn you he is not, he will forget them as often as he remembers, in the years to come, and you will have to resort to patience as well as tact, not to have an occasional jar over such matters."

There was no doubt or fear in daughter-in-law's eyes. There seldom is in the eyes of inexperience. Everything went beautifully for the dear children for some time. But by the time a summer and its heat and work, and a winter and its cold and work had passed, or nearly so, I could see, when visiting them during the holiday season, that "breakers" might not be far ahead.

As I have remarked, daughter-in-law was a city bred girl, but as true and plucky a little soul as ever drew the breath of life. She struggled along, watching the water pail, as I had warned her she would need to, when she had been used to turning a faucet for water; cleaning and filling kerosene lamps, when she had always before had electricity; cleaning up after and replenishing wood-fires in stoves, instead of merely lifting a draft or a check chain to a furnace; kneading bread, running the sewing machine—but what is the use of enumerating further? All you women know the things that tested her strength to the limit.

I went to visit them a week before Christmas and, though not a complaint did I hear, as soon as I realized how things were I decided to make a good long stay. They had planned that their first child, whose advent was expected some time near the New Year, should be born in the same room his father was, a pretty sentiment which had pleased us all. But when I looked at that blessed little girlmother and realized, as she could not, what lay before her, I concluded this was where I would step in.

So I took son aside and talked to him about the whole matter. He, dear boy, had been anxious over the affair, but, man-like, had felt helpless as a baby. The upshot of it all was

that we persuaded daughter to go to her mother's home, in the city, to await her summons, when she was too go to a hospital for care. Son saw her safely there and, while it seemed hard for them to be apart, I told him I had plenty for him to attend to on the farm and wanted him to help carry out some New Year resolutions.

II.

In order to give credit where credit is due, I want to tell you what happened at a recent meeting of our little church, "society." Our church is a small country church, I had almost used that expression I hate—"a struggling country church." But while I can clearly see that its "struggles" are not over, by any means, I think I can also see that they will not prove vain struggles, since Mrs. Tompkins came in our midst. And Mrs. Tompkins is the principal actor in the story I am going to tell you. Of course you must understand that "our church" to which I referred above, is the church to which we belonged so many years, when we lived on the farm. We took our membership to the city, when we moved, and are already quite at home there, but the roots have gone so deep, in the country community, that we do not care to dig them all up and, whenever we come back to visit son and daughter on the old farm, it is still "our" church and "our neighbors" who are its members.

So, you see, that is how I attended the "society" meeting, last holiday time, when I went to the farm to visit. Mrs. Tompkins had moved into the community, since we had left, so I had not seen her until that day. I was loath to leave daughter-in-law, who looked so frail and so uncomfortable, and went to the gathering full of undefined fears and forebodings, and what Mrs. Tompkins said just crystalized my feelings, until I knew exactly what to do and how to go about it. This is the "story" at last.

The "society" were discussing what improvements should, or perhaps I better say *could* be made in the little church-building, when Mrs. Tompkins said:

"Let's get rid of those miserable old stoves and put in some kind of a heating arrangement that will look well and not scorch everybody within a radius of three feet and freeze everybody without!"

Several members exclaimed: "But the expense! We couldn't!"

Then some one else spoke up:

"Never mind, Mrs. Tompkins; you'll get used to it, when you have been here a while longer."

And Mrs. Tompkins replied:

"That is just what I am afraid of, that I'll get used to it!"

Now you may wonder how that remark helped me any with my fears that daughter-in-law was never go-

ing to be strong enough to do the work on the old farm, where so many generations of us women, who had been blessed with constitutions akin to our horses, had done it. This was it. In a flash I saw what had happened. From generation to generation we had gone on doing things in that old farm house, just as they had been done for years before, putting up with the inconveniences and hardships, accepting them all as a part of "living in the country" until we had "got used to it!" and did not realize there was any other way of doing.

I should like to tell you more of that "society" meeting, for I assure you it was an interesting one. But I must stick to my text and tell, instead, what a reformation Mrs. Tompkins' simple remark made in our old farm house. When once the idea popped into my head that it was a misfortune, and sometimes a crime to "get used" to bad conditions, it was perfectly wonderful the thoughts and things that followed in its train.

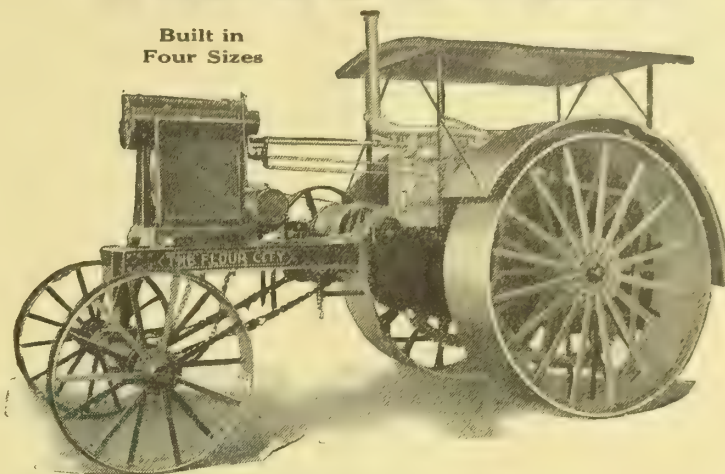
The next day we got dear, little daughter-in-law off to her mother's, in the city, and then, as son said, "things began to whizz!" I sent for his father and we had a family conference, the like of which had never been held in the old sitting-room before. I told those kind, but conservative men just what had been happening, in the Tucker farm house, all these generations. How, at the expense of the flesh and blood of the women folk who had carried on the work of that house, money had been saved to swell the bank accounts of the successive families. Up to the present time, it had chanced that the women who had come as brides to the old home farm had brought as a part of their dowry, constitutions of iron, so we had failed to recognize how their strength was being overtaxed. But now that our own little daughter-in-law, with a spirit as brave and loyal as any of her predecessors, was facing the coronation of motherhood, with her far too frail physical reserve, it had been revealed to me what fools we all were!

Then, when those blessed men were so scared that I knew I could command the half of their kingdom, I waded in. Perhaps because Mrs. Tompkins had begun with the worn-out heating arrangements at the church, that is where I began. I said:

"Look at this stove! It is not the same one but it is as near a counterpart as could be secured, of the one that was put into this room when this old house was built! It is a good stove but it is like a baby and has to be 'fed' at regular intervals. No matter how hard son tries to attend to it, I know, from personal experience, that his wife is going to lift the chunks, that are beyond her strength to handle, instead of calling him from the barn to replenish the fire. "And," I continued, as a sly

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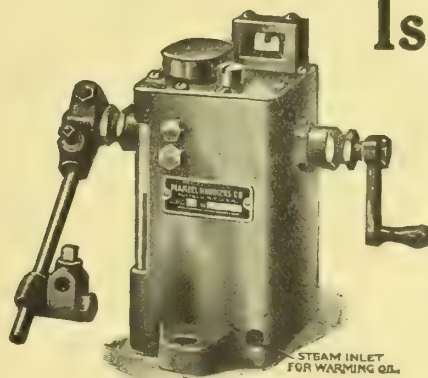
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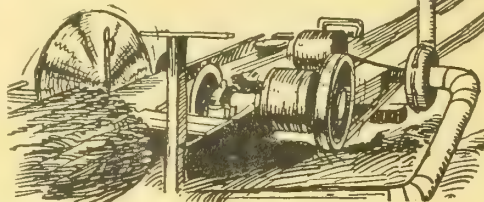


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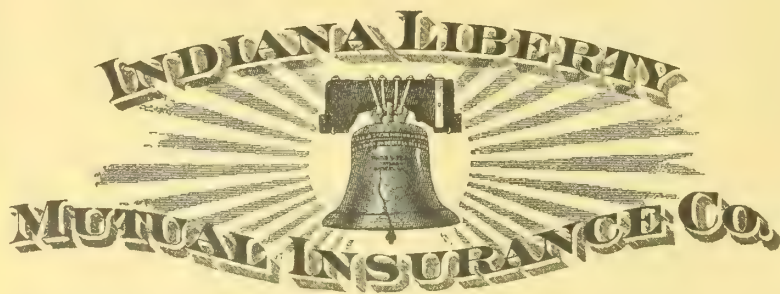
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"dig" at his father, "I dare say there have been women, in this house, who have even carried the chunks in from the wood-house, when their husbands have gone to town, forgetting to fill the box! Beside tending the stove, there is the strain of cold rooms, in which beds must be made, cold floors that turn one's feet to aching torment, the anxiety about the babies—oh, I don't need to go on. We are going to have a furnace in this old house by the time those blessed children (I knew children would bring them round) get home!"

And a furnace we had! It really was not such a terrible ordeal to install one, when once we had become enthusiastic about the matter. You see the cellar was like most cellars in country houses, twice as big as was needed for actual storage room. So we partitioned off a room of ample proportions for storing fruit, vegetables, meat barrels, etc., and then had plenty of space for the furnace and a coal bin. If you have ever shivered around, with icy fingers, making beds in an up stairs bed-room that seemed twice as cold as the out-of-doors, and have postponed the

plunge into the same temperature at night, until far past your proper bedtime, you will appreciate how it seemed to father and myself to go into the northeast bedroom, after the furnace was working, and find it quite warm enough to undress with comfort and decent leisure, and mattresses and sheets actually sufficiently warm, so we did not lie with our knees drawn up near our chins, until we cramped so we had to straighten out!

That first night I said to father, as we slipped into the nice warm, bed:

"I am so sorry for all those dead women, I can hardly enjoy it!"

"What in the name of thunder are you talking about?" he asked.

"Why, all the Tucker women who have not had a furnace in this house," I said.

"Huh," he grunted, "I wouldn't let that worry me!" and he was snoring in two minutes.

But I was too busy thinking about the other things we were going to change, before daughter-in-law came home, to go to sleep for some time. Next month, I'll tell you of some more of them.

Give Your Motor a Square Deal

BY AN OLD OIL MAN

LUBRICATION mistakes are the most costly mistakes a motor car owner can make. Improper lubrication will wreck the finest engine built. Proper lubrication will safeguard it for years and insure sweet running; it will keep your car out of the repair shop; it will reduce costs of operation; it will save you from road troubles.

A motor car engine is a delicate piece of mechanism. It operates at terrific heat and under severe strains. All sorts of care is needed to prevent friction. In order to keep the parts of your engine from friction, they must be kept well lubricated. Two metal parts, rubbing against each other at high speed, generate extreme heat. To prevent this friction there is only a thin coating of oil which acts as a cushion between the metal parts. If that thin film of oil is not of good quality it will not do its work.

In buying lubricants for your motor car, truck or tractor do not let price considerations govern your choice. It costs less to produce poor lubricants, but the price you pay in lost service, in repair bills, in vexatious troubles, is many times the difference between the cost of good motor oils and poor oils.

It is a general rule worth remembering that advertised and trademarked products are safest to buy. The manufacturer who advertises his trademarked products knows that in order to live and prosper he must put good quality into his products. This is your protection when buying ad-

vertised and trademarked motor oil, gear greases and gasoline.

Extracting the different products from crude oil,—petroleum—is a process of scientific refining. Crude oil is a nasty-smelling, viscous stuff. Its elements are so closely blended that the processes of separating them has been compared to separating the blended colors of the rainbow.

Scientific refining processes separate these various elements of crude oil and process them by a long and intricate series of operations until each element is completely isolated. It entails countless costly tests, running into the millions in big refineries. It is only in this way that it is possible to obtain pure oils that will stand the tremendous heat and friction of operating an automobile engine at high speeds.

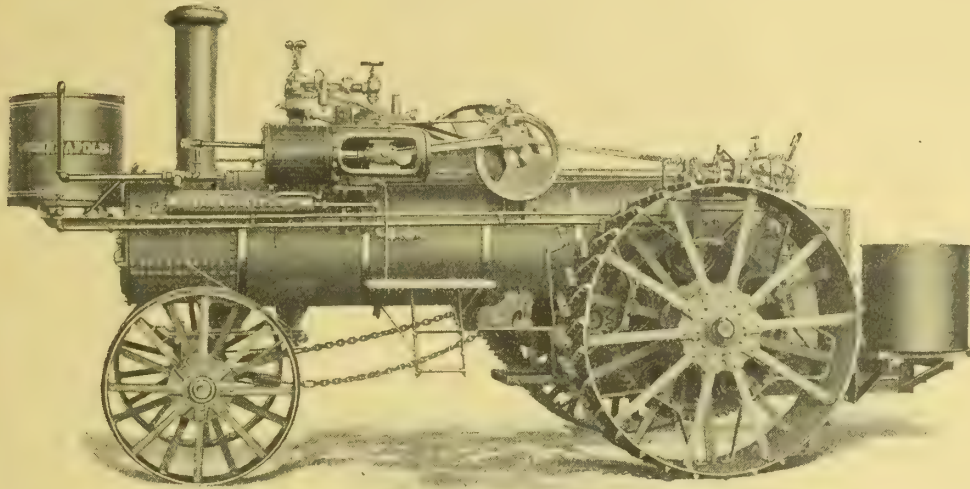
Don't neglect the lubrication of your motor car. Keep it well supplied with lubricating oil at all times. See that this oil is pure, tested to stand the hard usage it will get in the engine, and renew it often so that no sediments may remain to carbonize your valves and cylinders. The time and expense you spend in applying good oils will pay big dividends.

Not Anchored

"I see Newpop at the club quite often since his baby came. I thought he was anchored to a home life." "He was, but at the first squall he began to drag his anchor." —Boston Transcript.



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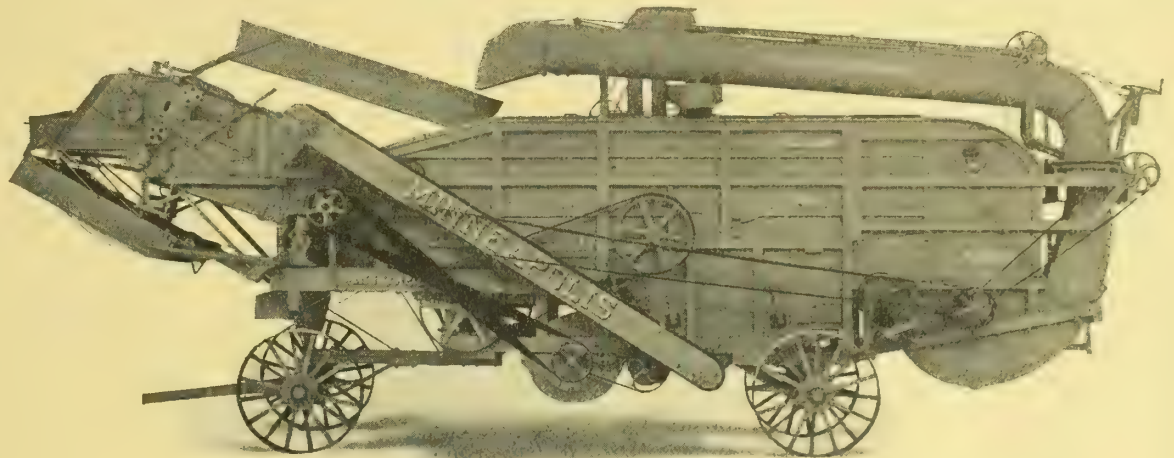
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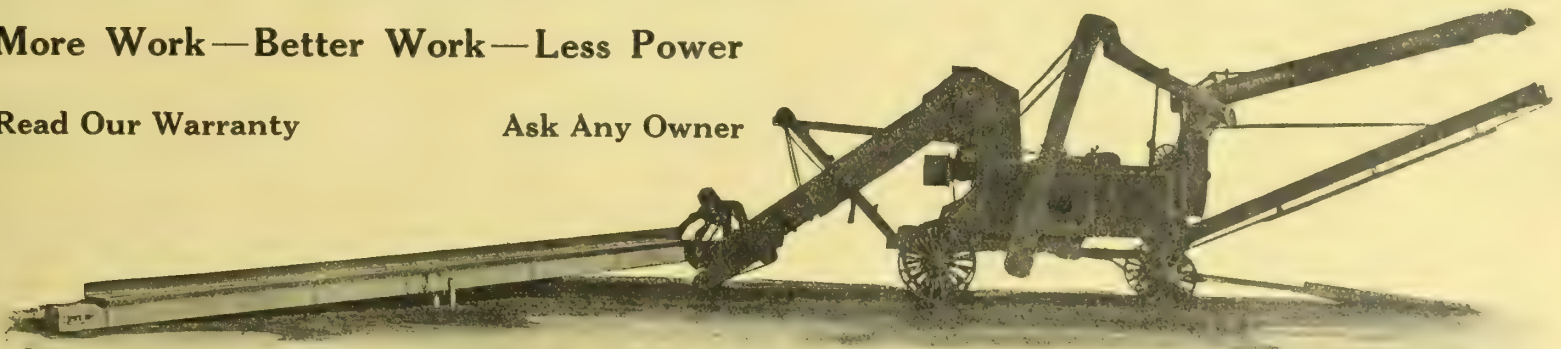
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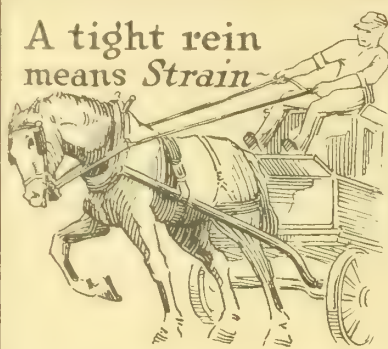
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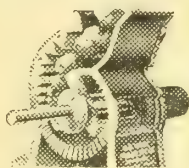
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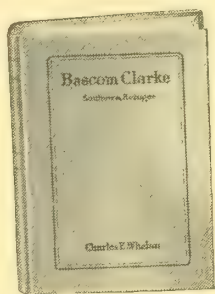
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Shall Farmers Operate the Land Banks?

By EARLE W. GAGE

THE farmer-borrowers of the four thousand local National Farm Loan Associations of the country are pretty weary of imitation coöperative land banks; they want something beside a dream with a night-horse as the "morning-after" effect.

These farmers have good reason to be tired, too. They have not only advanced the unquestioned collateral security to permit the making of the more than \$500,000,000 loans, but they have subscribed to the capital stock of the twelve land banks to the extent of five per cent of this sum, and have assumed a liability against the repayment of their neighbor's loans to the extent of ten per cent of these loans. In other words, they have advanced \$50,000,000 worth of farm lands and buildings as against the payment of mortgages of farmer-borrowers of their associations.

And, after having done this, these farmers find that they have not one word to say about the administration or operation of the various Federal Land Banks.

Just contrast that against the man who owns but one hundred dollars' worth of private bank stock, but who gets a vote on who shall direct the bank each year, and you have a slight contrast between the two.

We farmers for more than forty years fought hard in getting a land bank system. The original intent and the first act passed promised that these banks should be turned over to the farmers when \$100,000 of the capital stock in each or any of the banks was held by farmers. But in 1918, under pretense of war-time legislation, this was taken away from the farmer-borrowers and vested in the four members of the Farm Loan Board, of which the Secretary of the Treasury is chairman ex-officio.

Since that date, the farmers have had nothing to say, and will not have until the system is turned over to them. Every farmer ought to know this, because the word has gone out that we have a "coöperative farm loan system." We have to just this degree: we take orders from five men or their delegated appointees in the land banks. We coöperatively subscribe to capital stock, and assume liability, but that is about as far as the coöperative bug travels.

Would it be fair and just, sprinkled with ordinary common sense, for the more than seven thousand National Banks of the country to take orders only from a room in Washington? How would business prosper? I imagine about like farming has under such conditions.

Then why should we farmers permit five men to dominate the Federal Farm Loan system, when we advance

the security, buy the stock and assume the liability? Have American farmers reached a stage where they require a guardian to manage their business or are they competent and intelligent? Is "taxation without representation" still considered tyrannous?

Under the protest of the Federal Board, the four thousand local National Farm Loan Associations are being organized into the National Union, which shall speak for the farmer-bankers as do the officials of the American Bankers' Association for private bankers.

Here in New York, when we endeavored to organize the Dairymen's League, we had to fight the meddling middlemen of the milk trust; when we wanted a fruit grower's association, there were enemies, and when we wished to buy feed together, the millers jumped up and cried out. So when the Farm Loan Board employs its official stamp of approval to combat an honest endeavor to institute an intelligent and concerted union for the best welfare of the farmer-borrowers, they characterize themselves better than we could hope to. Folks who fear coöperation usually have a pretty good reason.

And don't overlook the point that the dozen Land Banks were closed, as were also the more than thirty Joint Stock Land Banks, during the season of 1920, because this same Board flatly refused to recommend to Congress, as the local farm loan associations wished, that an emergency bill be passed which would permit of tiding the farmer over the 1920 crisis.

Judge Charles E. Lobdell, Farm Loan Commissioner, writing Congress not to pass this bill, included a pertinent sentence in his letter, in which he said: "The Farm Loan Board does not believe that the Government should enter into the business of making farm loans." The members of the thousands of farm loan associations agree upon this; neither should the Government, or its officials, enter into the business of

dominating the farmer's loan system.

It must be remembered that pretty good reports reveal the fact that Mr. Lobdell was engaged in the private farm mortgage business in Kansas about the time the Farm Loan Act was passed; it is likewise reported that he was very active in the halls of the American Farm Mortgage Banker's Association there, and we all know that this institution was solely responsible for the petty lawsuits which resulted in the untimely closing of the farm loan system.

In all fairness to Mr. Lobdell, and in greater fairness to the American farmers, is it possible for a man with a private farm mortgage banker's experience and viewpoint to administer the Federal Farm Loan system in the best interest of agriculture? And, further, how does it happen that a former member of the American Farm Mortgage Banker's Association now heads the Federal Farm Loan system, which is recognized as the greatest competitor of these same bankers?

Judge Lobdell, despite the fact that there are now practically four thousand local coöperative National Farm Loan Associations, openly acknowledges that he has no faith in farmers' coöperative associations, and that he is favorable to amending the Farm Loan Act so as to sweep these associations away and replace them with local loan agents, the same as the private farm mortgage bankers have. This, in face of the fact that the organization of the present four thousand associations represents the most successful illustration of coöperation in agriculture in modern or ancient times!

A bill will soon be presented before Congress that will turn the Federal Land Banks over to the farmer-owners, and remove them from political domination. Farmers interested in such legislation ought to write their congressmen and senators at Washington to vote for this bill, if they wish to control their own land banks.

The First Show in Seven Years

(Continued from page 10.)

radishes, or straw; each having three splendid horses to draw the load to market.

On Saturday afternoons the wagons could be seen returning with a load of manure, the driver reclining on the rail board, wrapped up in sacks and horse cloths. Ten years ago, they would have been seen fast asleep, leaving it to the horses to find their way home; but motor traffic has made the police today more alert towards these sleepy drivers. Here,

at this coffee shop, the difference between then and now is most distinctly marked. Only a stray wagon now stops at night there. The truck has displaced these slow-moving wagons, and what once took two days to perform is now done in a few hours.

The English farmer has certainly taken to the truck, and at the show there were a goodly number examining the various makes and looking with experienced eyes at the various

vehicles offered for their consideration. A considerable number of the vehicles shown would have little interest to the average American reader, though in passing it might be instructive to give some prices. For instance, the big charabanc open-top motors, for carrying many passengers, were listed at prices which ranged from \$4,200 for a three-ton to \$6,000 for a six-ton. This year a large number were put on the roads, running daily from London to the seaside and to adjoining towns.

Naturally one looked for cars which would be of interest and of use to farmers. Only a few were specially designed for this purpose, though there were others which had novel features and which gave desirable results.

The three-ton Star truck is specially designed for a market gardener. It has a four-cylinder engine with pump circulation. Four-speed gear-boxes are mounted on a sub-frame, a flexible jointed shaft connecting the internal cane clutch with the driving shaft of the gear box. It has a high open-sided body with grid sides, it being specially suited for carrying vegetable produce.

The great features of the show were the various tipping arrangements attached to the different lorries. One of the best was a Swiss truck. Its two and one-half ton chassis was an example of splendid workmanship. The Swiss are noted throughout Europe for their watches: this chassis, one would think, might have been made in a watch factory. The engine parts, which were visible, made some of the neighboring exhibits look very amateurish by comparison. The most interesting part about it was the manner in which it tilted the body. A hydraulic cylinder actuates a massive bell crank, at the end of which is a universal link connected to a steel ball-and-socket joint underneath the body. With the greatest of ease the body can be tipped to the right, brought down, then tipped to the left. If necessary, the whole body can be tipped, so the front is up in the air, and the back touches the ground.

One company showed a lorry with a short tipping body, which is worked by a pump operated off a shaft within the gear box, the gears being thrown into action by a lever mounted on the dash. Another feature on this lorry is a mechanically-operated gear for blowing up the tires. A small pump is driven from the tail-end of the gear-box secondary shaft, this being put into action by a lever on the dash-board.

A French firm showed a truck whose body can be tipped so the back part touches the ground. The back end is hinged at the top, so when the body is tilted, it swings out at the bottom and allows the truck's load



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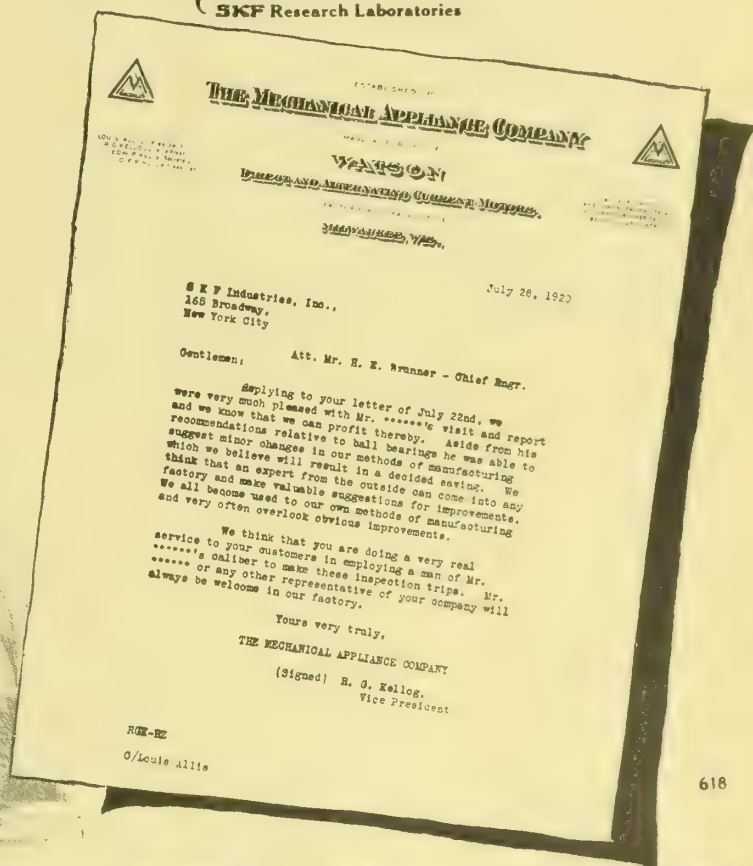
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to fall on the ground. Such a body greatly facilitates unloading, the arrangements for the tipping and returning to normal being simple and effective.

One of the giants of the exhibition was a six-wheeler. The total load which is drawn by this motor is seven and one half tons on the body and six tons on the trailer. The driving wheels are at the front of the body, being connected to the engine by a drive chain. The tractor chassis is made so it can turn in a circle of thirty-two feet. The advantage of having the body separate from the chassis is very obvious. It relieves

the weight by carrying that on six wheels, instead of on four, and however much weight is put on the body it does not impose any vital strain upon the mechanism of the truck.

It need not be said that the American trucks—and there were many—attracted much attention; but the tractors attracted more. English farmers are just about to realize that there is money in tractors and in large farms.

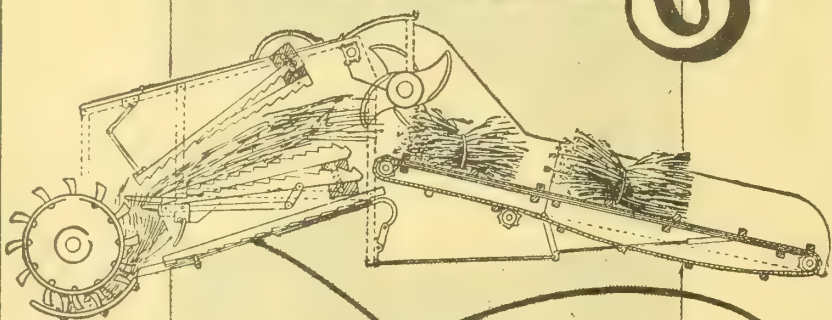
One tractor of British make was shown attached to a side-tipping trailer. The engine develops 22-horse power, and it has a bore of three and three-fourths inches and a stroke of

five inches. The crank case is supported on the main frame by three-point suspension, the clutch and the gear box being supported from a large flange at the end of the crank case. Two speeds forward and one reverse are provided, also ample brakes.

The American tractors on exhibition are too well-known to require description. Taken on the whole, the show proves that a tremendous advance has been made since 1914.

(Editor's Note:—W. J. Blackmur is the father of A. G. Blackmur, whose articles have pleased many of our readers. His address is 96 Little Ilford Lane, Manor Park, England. He will be glad to answer questions regarding English conditions, farm trucks and tractors.)

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Parson Dickson's Sermon

IN de book ob Matthew yo' will done find in de Suhmon ob de Mount dat 'mong oder things de Marster taught dis gospel: "Foh if ye fohgib men dah trespasses youh heabenly Fathah will also fohgib yo'. But if ye fohgib not men dah trespasses neithah will youh Fathah fohgib youh trespasses."

Dat am mighty good doctrine to begin thinkin' 'bout right at de beginnin' ob de new yeah an' it am mighty good gospel to preach an' practicee all de yeah. All men trespass 'gainst oder folks in a greatah or less degree at times an' all men who err need repentance.

Did yo' eber stop to think what selfish bein's we all am? Not one ob us but what will condemn in oders de bery same things which we am guilty ob ouhselves.

De good lookin' woman knows dis fact long befoh anybody eber tole huh an', bein' good lookin', she smiles at de menfolks dat pays huh 'tention, yet if huh husband has a weakness in de same direction an' she catches him smilin' at some oder pretty women, it done makes huh mad. Laikwise de husband takes libahties dat he condemns in oder men an' would show his dislaik mighty plain if his wife does as he does.

We am all guilty of back-bitin' yet we considahs it a mean trick in oder folks. What a grand ole wuhld it would be if eb'rybody in 'criticisin' oder folks jest said what dey would say if de folks was right dah face to face to heah it all. It am a trespass to abuse youh neighbah behind his back an' say what yo' wouldn't say befoh his face, an' yo' would feel mighty bad if yo' done huhd him say de things 'bout yo' dat yo' hab done said 'bout him wid impunity. But if yo' can fohgib oder men freely foh what dey hab said 'gainst yo', or foh any wrong dat dey hab committed 'gainst yo', den an' only den can yo' hope foh oder folks to fohgib yo' foh any wrong yo' may hab committed 'gainst dem.

Ebery night when many ob us lays down to sleep we prays de Lawd to fohgib ouh trespasses as we fohgib dem dat trespass 'gainst us, when in truf, we habn't fohgiben anythin'. Yet we want de Lawd to do foh us what we ain't willin' to do foh oders. It am easier to fohgib dan it am to hold malice if we only think so, an' if ev'rybody would staht de new yeah resolbin' not to speak ebil ob oders or to wound de feelin's ob anybody an' if dey did to go right to dem an' ax dah fohgibness, befoh de end ob de yeah de wuhld will hab made great progress towahds de time when we may hope foh all nations to join in beatin' swohds into plowshahes an' speahs into prunin' hooks, an' when one nation can rest contented in de thought dat no oder nation am gwin' to pounce on it kase de oppohtunity to do so seems right. If we done fohgibs men dah trespasses as we wants dem to fohgib us, so will we be willin' to lib up to de teachin's ob de Golden Rule which teaches us dat "As yo' would dat men do unto yo' do ye eben so unto dem." An' if dat time could be brought 'bout 'mong all nations den indeed would de millenium come on earth an' de wuhld be a fit place foh saints an' angels to abide.

Dis am a grand ole wuhld if we only tries to see it from de right angle 'stead ob messin' round findin' fault wid eb'rything an' eb'rybody. If we gets up in de mawnin' an' breathes in de fresh pure aih into ouh lungs an' stahts de day wid a song 'stead ob a wail, an' speaks kindly to eb'ryone, de whole viewpoint will done be changed an' long befoh de day has gone some joy 'stead ob sorrow can be realized. Let us begin de new yeah wid a promise to ouhselves dat we will try ouh bery best to make dis de best an' happiest yeah ob ouh libes.

De Lawd Jesus taught dese lessons an' He practiced dem in His eb'ryday life. It made no diff'rence wid Him whethah de man was a Jew or Gentile, a publican or a sannah, if he was sick He done healed him an' if he was lame He done cured him, an' all widout axin' foh anythin' in return. An' what did de Son ob Man receibe in retuhn foh His great kindness? Some ob dose He had befriended done tuhned 'gainst Him in His houh ob need, eben His own disciples desuhtin' Him, an' Petah, to whom de Marster gabe de keys ob heaben, denied his Lawd an' Marster an' swore dat he didn't know de man.

De shame ob it all am dat we 'buse ouh best friends de most an' fail in keepin' faith wid dose who trust in us when dey need a friend. It am a good time to begin buildin' character an' settin' good resolutions, an' den prayin' foh strength an' powah to keep right on doin' good an' trustin' in de Lawd to repay us, which He will suahly do in heapin' measuah.

Let de choir lead in singin',

"Dah shall be showahs ob blessin's,
Dis is de promise ob lub,
Dah shall be seasons refreshin'
Sent from de Savior above,"

an' lookin' foh de blessin' we will be dismissed.

Soil Erosion in Iowa

(Continued from page 9.)

considerable annoyance. The use of sod strips in places of this kind cannot be too strongly recommended. A strip of sod acts in two ways to prevent erosion. It provides a protective covering to that part of the field where the flow of water during rains is swiftest and greatest, and because of the grass and weed stems, it retards the motion of the water next to the ground, reducing its power to cut, and even in some cases causes a deposit of soil, rounding out valleys that otherwise would become increasingly angular and abrupt. When plowing fields in which sod strips are to be left, the furrows should, as far as possible, be at right angles to the strip, not parallel to it, and the plow should be taken out at varying distances from the ditch so that there is no well defined line where the plowing ends and the sod begins. To plow parallel to the ditch invites the water to follow the furrow and start a new ditch.

Where, by reason of neglect or of excessive rainfall, the hillside valleys have been eroded, forming ditches from several inches to a foot or more in depth, it is often desirable to plow in and partially fill the ditch before attempting to get a sod started in the bottom. This is quite commonly done but it involves the chance for the loss of a considerable quantity of soil. A heavy rain coming before the ground has been compacted and root growth started is likely to wash out all the loose soil. The chances for success are greatly increased by putting low obstructions a rod or two apart in the bottom of the ditch before it is plowed in. These obstructions should not be of a permanent nature and should be so low as to be entirely covered by the soil plowed in. For ditches a foot deep and two feet wide an armful of stove wood slightly sharpened and driven in the bottom of the ditch in the form of a crescent curved downstream and low in the middle, and having a small forkful of straw packed against it above makes a most effective obstruction. As soon as the ditch has been plowed in it should be seeded down to rye or some other quick growing grass and a permanent sod established as soon as possible.

The unglaciated land in the extreme northeast part of the state contains areas that are more or less troubled with sink holes. A crevice in the underlying limestone allows some of the earth to drop through and be carried away by the underground stream. Gradually this cavern is enlarged until the surface soil falls in forming a bowl from five to fifteen feet deep twenty feet or more across. There is usually a hole at the bottom through which soil disappears in time of rain and in



After Supper

Your Time is Your Own

Make good use of it. Don't lounge around in idleness. Those lazy hours between the evening meal and bedtime can be made productive to you if used right.

Learn to look upon even your spare time as money. For it is that. And then invest it in work that will bring you the most attractive returns.

The man who during the winter evenings prepares himself for a better job is making the right use of his time. And his investment is bound to pay big dividends.

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which livestock is occasionally lost. In sections where sink holes are found there is no river system since all the run-off is taken directly to underground streams. The distribution of sink holes varies considerably, there being sometimes as many as five or six on a ten acre field. Naturally they present a serious obstacle to farming operations. Many attempts have been made to stop them by throwing in logs and brush but the earth keeps sliding in. Some of the crevices in the rock have been plugged with

stone and cement but this results in a mudhole since there is no other way for the water to be drained away. The problem is to get rid of the water, retain the soil and not form a surface ditch. This has been successfully done by cementing a sewer tile into the crevice of the rock and building up from it a flue of sewer tile uncemented. In time of rain the water flows over the top of the tile, leaving the dirt behind. That which cannot go over the top soaks through the joints below. Some of the larger ones need to be provided with a man-

hole grate, but a good many can be capped when within two feet of the level after which they may be covered with soil, farmed over and forgotten.

On the whole, Iowa is not badly eroded. The land is rolling but not rough. Some soils are much harder to hold than others, but in every section there are men who have been watching and studying the problem and are successful in checking erosion. Half the success of any method lies in the man who puts it into use and watches his work, repairing any damage in time.

Organization Notes

(Continued from page 18.)

Newsom, our national president, renew your acquaintance with J. B. Parker, of the American Thresherman and Farm Power; also meet our Canadian brother, Joseph Cushman, president of the Ontario Brotherhood. There will be several other speakers and you will be given an opportunity to express your views, voice your complaints and make your suggestions. The program will be interspersed with music and singing, a group of high class entertainers will be with us one whole evening and there will be something doing every minute."

HAROLD SLOCUM, *President.*

The Threshermen's Association of Shelby County, Indiana, held a good meeting on the night of December 29, and elected the following officers for 1921: C. K. Poer, president, and A. C. Howe, secretary.

A fine banquet followed the meeting, the county agent addressing the threshermen and plans being made for 1921. W. E. McCreery of the Indiana Brotherhood was one of the guests, and he reports that seldom does a county meeting show the spirit that the Shelbyites evinced.

Harry P. Kellogg writes his old friends that he regrets business cares will prevent him from attending any of the Western conventions this year. He writes: "I have just rented a place in Rochester in which I intend to sell threshing supplies, to write fire insurance on threshing machinery, and to keep a vacant chair ready for the threshermen. It is not elaborate or nice but what we lack in those things we will make up in the warmth of our welcome." (Anyone who knows Harry Kellogg knows that this is not a mere idle statement. He means it.) "My place is near where the Frick Company used to be, in the Arnold building. I will always be glad to see any brothers who travel this way. Remember our convention is to be held in Royal Mirror Hall, 15 South Avenue, where all our friends can show goods and sell them if they wish."

The members of the South Dakota Threshermen's Protective Association, organized by the Brotherhood for the purpose of issuing protection under the Workmen's Compensation Law of South Dakota, were called together by H. F. Borneman, president, on December 18 for the purpose of re-incorporating and becoming a regular insurance company instead of an association of employers, as it formerly was.

At this meeting, which was well attended, a resolution was passed whereby a new company would be incorporated. As soon as it is fully

authorized to do business by the State Insurance Department, all the unfinished business and all the assets and liabilities of the South Dakota Threshermen's Protective Association will be transferred to the new company.

The work is already under way for the next annual convention, which will be held in Sioux Falls, March 15, 16, 17, and this promises to be the biggest and by far the most important meeting of threshermen ever held in the Northwest. Uncle Silas has promised he will be with us or else send somebody to represent him and there are several other mighty good features on the bill that will be both instructive and entertaining. We will have the big vaudeville show on the second evening of the convention.

It will be time and money well spent for every threshing machine owner or operator to be at Sioux Falls on these dates. You cannot afford to miss it.

W. A. SWARK.

Sec.-Treas.

This office has received copies of the Proposed Uniform Vehicle Law as the same was adopted at the December meeting of the International Traffic Association in Cleveland. This law, if adopted, will contain so many objectionable features that it is hard to understand how it has been allowed to go so far without more strenuous opposition.

One feature of the law is the absolute prohibition of the use of traction engines or tractors having lugs or angle irons of any sort upon the public highways. As this association has announced its intention of trying to have this law passed by every one of the forty-two state legislatures which convene this winter, it is apparent how far reaching the consequences of this law may be. There are many other objectionable clauses in the law. One of these is a flat tax of three dollars upon all horse drawn vehicles. This means that any farmer who owns a hay rack, a farm wagon, a buggy, and some other farm vehicles, will be taxed the flat amount on each one of these vehicles. Now there is an additional clause, saying that in the case of vehicles used exclusively for agricultural purposes, the tax is to be one-half of the regular amount. Still, this means that at the very least the farmer will be obliged to pay one dollar and a half on each horse drawn vehicle on his farm, and probably the burden of proof will be upon the farmer to show that these vehicles are used exclusively for agricultural purposes.

There are flat taxes upon the traction engines and tractors owned by farmers, these taxes being

based both on horse power and on the gross weight of the machines themselves. It is scarcely to be believed that the framers of this law will be able to pass it through the state legislatures. However, if no action is taken against the framers of this law, there is no telling how soon they may be able to put the thing across.

J. B. Parker, the field man for The American Thresherman and Farm Power, was in this office on New Year's Day. At that time he pointed out that W. H. Newsom, president of the National Brotherhood, has been very active in doing all that he can to prevent the adoption of this law. He attended the Cleveland meeting, although his presence was viewed with no delight by the men who met to plan this law. Mr. Newsom has spent prodigally both of time and money in attending to this matter for the threshermen. The men who are at the head of organization affairs feel that it would be no

more than right for Mr. Newsom to have some sort of fund by which he might be enabled to carry on this fight for the good of threshermen in general. It has been suggested by Mr. Parker that if each thresherman donated one dollar for a common fund to be used in opposing this and similar laws, Mr. Newsom would not be hampered by his present lack of funds. Since Mr. Newsom has donated his time to this cause, it seems no more than right that his expenses should be adequately cared for. We insert this notice at this time in order that the threshermen may think about this matter before attending their state conventions. The matter is urgent and requires careful thought during the winter campaign. Wherever possible, the brotherhoods should investigate this law and reach some understanding about giving concrete support to Mr. Newsom, who at present is fighting their battle almost single-handed.

Is A Narrow Furrow Wasteful?

BY A PENNSYLVANIA WHEAT GROWER

IN the city near my farm there is a small firm making a device that is different from anything I have ever seen. It is based on the principle that a narrow furrow for grain does not produce the best stand of wheat.

It is arranged to attach to any grain drill boot, the purpose of which is to scatter the grain or grass seeds over a wider area than is the case with ordinary drill boots. This result is accomplished by the use of a piece of pliable metal attached to the back of each boot of the drill with small bolts and then bent forward at the lower part until the end rests against the toe of the boot. The bent portion of this attachment is V-shaped so that when the grain and grass seeds, falling from the hose, strike it, they are deflected to both sides and fall to the ground to the width of two inches. As a furrow opener, a shovel about three inches wide is used, so as to provide a wider furrow than the usual narrow shovels produce. This permits the grain and seeds to be spread out over a wider area, and they are not confined to the narrow and deeper furrows.

Several farmers near me have tried this device and they claim that the grain will stool out much better, producing heavier straw, larger heads, and a better quality and greater quantity of grain per acre. One farmer claimed that this system of drilling has increased his yield of wheat by six bushels per acre.

While no doubt this idea is patented, I believe a homemade device similar to it could be made to work. The device is very easily attached to the drill. Two holes are bored in the rear of each boot and through the distributors. Then small bolts with round heads are placed in the holes

from the interior and the nuts are turned on from the exterior. The broad shovel is riveted to the front of the boot similar to the way the ordinary shovel is attached. The entire process can be accomplished by anyone having the necessary tools for riveting and a brace and bit for boring holes in castings.

The one thing that attracted my attention to this device is the claim, by farmers who have used it, that grain yields can be increased on the same land and with the same amount of seed. Have we been following a wrong system in drilling our grain in neat, narrow rows? Will this new method impoverish the soil? I should like to see an opinion on this point in The American Thresherman and Farm Power soon. Possibly some big grain farmer in a Western State will give us his views.

There's a Limit

When the German fleet surrendered to the British, French and American squadrons, the captive crews were taken aboard British battleships. One of the square-headed prisoners was deeply disgusted and showed it.

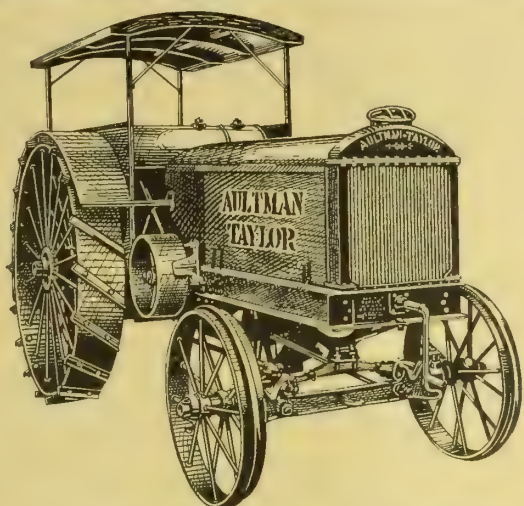
Walking up to a group of British tars, he spat far over the side, remarking: "Dot's vot I tink of your verdammt fleet."

Silence. He spat again.

"Und dot's vot I t'nk of your verdammt Admiral Beatty."

Again silence for a moment. Then one burly sailor hitched up his pants, saying: "You can think what you please about the British fleet and think what you please about Admiral Beatty, but you be damn careful whose ocean you go spitting into."

Why the 4-Plow Tractor Wins Out



Aultman-Taylor 15-30

WHY buy a tractor that will pull but two bottoms when you can just as reasonably buy the Aultman-Taylor 15-30 that pulls four—at less operating expense and less depreciation?

Compare the saving of the Aultman-Taylor 15-30 over the ordinary 2 or 3-plow tractor. Take plowing:

A 2-plow tractor replaces one man and two teams. A 3-plow replaces 2 men and 3 teams—while the Aultman-Taylor 15-30 4-plow tractor replaces 3 men and 4 teams. Thus the 4-plow tractor does double the amount of work of the 2-plow, in the same time—at practically one-half the operating expense.

And at the belt—this “big” small tractor will do a vast amount of work the ordinary small tractor cannot handle. It will easily operate a 27x42 inch thresher.

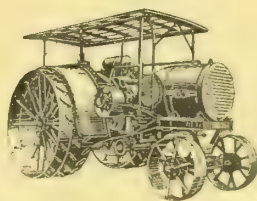
The 15-30 is built throughout for long life and perfect performance. It is mechanically **right**. Our fifty-five years' experience building power farming machinery insures that.

Your dealer will be glad to give you all the facts on the 15-30 and our two larger size tractors, the 22-45 and 30-60. See him or write us direct.



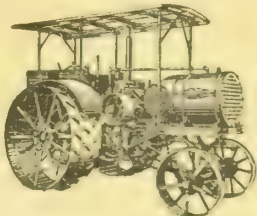
The Aultman & Taylor Machinery Co.
Mansfield - - - - - Ohio

Aultman-Taylor Kerosene Tractors



AULTMAN-TAYLOR 30-60

A huge, rugged machine with the brute strength for the biggest power jobs. The 30-60 is the acknowledged “King of Road Builders.” Actual performance shows that it will build more miles of road at less cost than any other power and at a saving of 50% over horse labor.



AULTMAN-TAYLOR 22-45

A heavy-duty tractor built along the same lines as the 30-60. A real, honest-service machine with the power to put through any job on your farm or on the road. It draws 6 to 8 plows and in the belt operates a 32-inch thresher.

Boys' and Girls' Department

An Alphabet of Health Chores

A child who would be strong as steel
 Will wash his hands before each meal.
 B clean—disease from water quails.
 Wash face, ears, neck.—Clean fingernails.
 C onquer desire to put things in mouth or nose—
 Dirty fingers, pencils, pens—or any of those.
 D on't fail to brush teeth free from grime.
 After evening meal and breakfast time.
 E ach day take deep breaths—at least ten.
 Protect others when you cough or sneeze again.
 F resh air you need—thirty minutes outdoors
 Or with wide-open windows is one of the health chores.
 G reat need have we all for plenty of sleep:
 Ten hours for a child.—Windows open we keep.
 H ealthy we'll be without coffee or tea today—
 Four glasses of water, and healthy we'll stay.
 I keep regular habits—I eat wholesome food.
 If I chew it slowly 'twill do me much good.
 J ust try very hard to sit up and stand straight.
 Help others keep neat, cheerful, clean-minded.—It's great.
 K is an awful hard letter to put into rhyme;
 But don't go without baths more than a week at a time.
 L, M and N, and an O and a P;
 Q, R, S, T—with a U and a V,
 Also W and X, and a Y and a Z—
 Why, all of these letters are easy's can be
 To keep health rules to, children, you see—
 But eleven's the number on which Crusaders agree.

The New Crusade

How many of you have heard of a Crusade? My! Just see the hands go up! I might have known you had, for our boys and girls have sharp ears and inquiring minds. But perhaps the Crusade you have heard about is not the Crusade I am going to tell you about. At any rate, the Crusade I mean is not any of the Crusades that people started off on, hundreds and hundreds of years ago, but an entirely New Crusade.

Now of course each one of you, who held up his hand to say he had heard of a Crusade, will know what a Crusade is. But for those who did not hold up their hands I will explain that a Crusade is a "journey" or "movement," the dictionary would probably say, to get something or do something that the Crusaders wish to get or wish to do very much indeed. In the Crusades that you have heard about in your history lessons, the Christians of western Europe started out to capture the Holy Sepulcher from some people called Saracens. But it is not about those Crusades that I want to tell you this time.

This new Crusade is a Children's Crusade and the thing the children are in search of is the most precious thing in this life. Now I wonder what you would guess that was. Diamonds? No, more precious than diamonds! Pearls? No, more precious than pearls! As Harry Lauder would say: "I see you dinna know," so I will have to tell you. The thing the New Crusaders are seeking is

PERFECT HEALTH!

And they call their Crusade "The Modern Health Crusade."

Now, as you all know, no one can be a Crusader or soldier without having certain things that he must do every single day. It may be that the first time you have these things

to do it will be great fun, but after a while, there is sure to come a day when you find it so inconvenient to do them and would love to put them off. But no, if you are to be a Crusader, you will find, just as your brothers found about being soldiers, you must do the things you are expected to do, whether you happen to want to do them or not!

And what are the things a New Crusader must do? "Health Chores," to be sure. And what are the Health Chores? I have put them in rhyme at the beginning of this page. Can you figure them out?

—AUNT JANE.

Raymond Helps Thresh

TOLD BY ANNA M. STOKES

I am only a very small boy, but I have been helping on the farm for a good many years, it seems to me, although my dad says it is only one year.

Anyway, last year, when threshing time came around, they let me go with the men instead of fussing around with the women. I carried water, and did just lots of errands; and so now, I'm a regular farmer boy.

I am sending you my picture, which is very plain. I'm up on the

water wagon, but I would have been down with the men if my Pa hadn't made me go back there and sit down. I guess the fact is Pa wanted the best place himself.

Whenever we have anything doing in our neighborhood, we all turn right in and help like fun. This is Jake Felsman's rig, and he goes out right around Coatsburg, Adams County, Illinois, and I live right near that town.

You can see Jake plain; he's standing right out front of the engine, and that other feller alongside the engine on the left side is Slim White; he's Jake's helper. But you just ought to see the women in the house.

This threshing is right on our farm, so Ma's got about a dozen women a-helping, and they all brought along something to help out so Ma and Sis wouldn't have so much to do.

In the winter time, when all the outside work is done, we have our big times. We have parties, and sociables and the women get up quiltings and rag carpet sewing, and then the men always get asked to supper; and I always go, too. If I don't eat more than any man there, it's just because I haven't as big a capacity.

Last winter all the women were

knitting. They made us kids wind the yarn into skeins for them, and the first thing you know they made us learn to knit—yes, sir, boys, too.

I made a sweater and a pair of socks, and, my land of goodness, I dropped about six stitches every minute. I can't get as much interested in knitting as in threshing.

Now, Mr. Thresherman, when it comes threshing time next year, I'll expect they'll put me in an important place, 'cause I've had experience and so many men are gone; we boys will have to do our share.

Yours truly,

RAYMOND.

From Our Boys and Girls

DEAR AUNT JANE:

May I have a few moments of your time, please? I would like to have you print our little Alfred's picture on your page. It is to be a surprise to his papa who is a reader of your magazine. He enjoys its regular visits very much and great will be his delight to see his little son on one of its pages. I will not detain you any longer but hope you can find a place in the next issue for Alfred's picture.

MRS. C. J. ANDERSON.

Elmore, Minn.

(We can never print letters or pictures in "next issues" as all material for this Department must leave "Aunt Jane's" hands at least six weeks before the magazine is published. Thanks for the picture. I hope you saw it in our December number.—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? I am nine years old. I am in the sixth grade. My height is four and one-half feet and I weigh sixty-two pounds. My father takes The American Thresherman and Farm Power. We have a Ford car. I have one brother and five sisters. I do not live on a farm but we keep a store. We have a cow, a pig and about sixty chickens. For a pet I have a dog. His name is Jack.

Your niece,
 JANICE GRIMES.

Fort Ripley, Minn.

(I am glad to hear from you, Janice.—AUNT JANE.)

DEAR AUNT JANE:

I would like to join your circle. I am thirteen years old and in the sixth grade. My father has a 16-horse power engine and an Advance separator and corn husker. For pets I have two cats and a dog, and a horse named Nellie. I have two



Now I Must Sit on the Water Wagon.



Some Day I Shall Run the Engine.

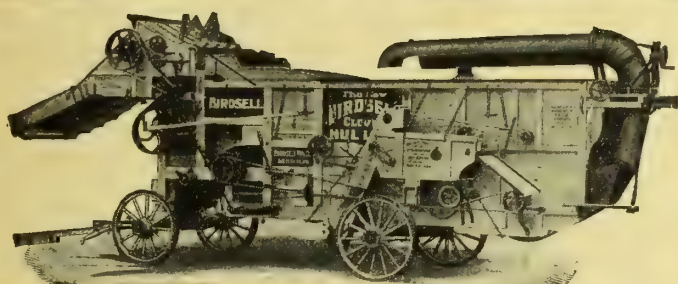
All For A Greater Year—1921

Better Net Profits For Work Done

BIRDSELL Clover and Alfalfa Huller owners will have more seed to hull this year than ever before. Low prices of wheat, oats and corn have brought the farmers back to Clover and Alfalfa as nothing else could.

Every farm needs clover: It is a crop that can be handled by machinery—no extra help required—a money crop from the start. The acreage this year is greater and farmers are going to take their profits on the crops that are easiest to handle. You should prepare now.

MARK IT—1921 Will Be a Big Seed Year



Many Threshermen will buy Hullers prior to April 1st to be sure they get them when wanted. For the next 60 days we are going to make an exceptional offer to those who want to buy. Write us

BIRDSELL MFG. CO.
South Bend, Indiana

brothers and their names are Herman and Omer. I have five sisters. Their names are Agnes, Elsie, Edith, Jessie and Irene. I will close, hoping to see my letter in print.

Your niece,

Tiosa, Ind. **BERYL HOLLOWAY.**
(Now you must write again, Beryl.—AUNT JANE.)

DEAR AUNT JANE:

I am a boy fourteen years old and in the eighth grade. My father takes The American Thresherman and Farm Power. I like to read the Boys' and Girls' Page. I go to school every day. I have two ponies, one named Bonny and the other named Teddy. My father owns one hundred and sixty acres of land. We live on it now. He also owns a Case threshing machine.

Your nephew,

RALPH STRINGHAM.

Dexter, Iowa.
(I am glad you like our page, Ralph.—AUNT JANE.)

DEAR AUNT JANE:

I will try to write a few lines to your circle. My papa is a thresherman. He owns two threshing outfits, two Case separators and one Reeves and Minneapolis engine. We live in a small town and I go to school. I am in the fourth grade and I have missed but one week during the four years, and that was when I

had the chickenpox. I am ten years old. I have two brothers. Their names are George and Louis. We have four head of horses.

Your nephew,

JOHN R. ALLEN.

Rockcreek, Kans.
(You have a splendid school record, John.—AUNT JANE.)

DEAR AUNT JANE:

I am a little boy of eleven years and I am in the fifth grade. My teacher's name is Miss Mabel Blough. My father takes The American Thresherman and Farm Power and I enjoy reading the Children's Page. I have light curly hair and blue eyes. For pets I have a dog, cat and a calf. I have to walk one mile to school each morning.

Yours truly,

THEODORE BUSH.

Hastings, Mich.
(Is it pretty cold to walk to school in winter, Theodore?—AUNT JANE.)

DEAR AUNT JANE:

May I join your circle? Papa takes The American Thresherman and Farm Power. I enjoy reading it very much, especially the letters. I am twelve years old and am in the seventh grade. My teacher's name is Miss Williams. I have no pets but had a dog named Sox. My brother felt very bad when he was killed. I have one brother named Howard. He is eight years old. Papa runs a

Huber threshing machine in the fall and sells tractors in the spring and summer. I would like to hear from some of the cousins.

Your niece,

RUBY CRANDALL.

Hetland, S. D.
(You write first to some other cousin, Ruby.—AUNT JANE.)

DEAR AUNT JANE:

My father has taken your paper for twenty-eight years. This is my first letter to you. I am sending you a picture of my half brother. He sure is a "Captain." My own mamma died when I was eleven years old. Now I have a very dear stepmother. My papa has run an engine for twenty-five years. We live on a fruit farm in the Ozarks. We have a fine brass band here. Papa plays the base drum. I hope to see my letter and the picture in print soon.

Your niece,

JESSIE REEVES.

Garfield, Ark.

(Did you notice your picture when it was published, Jessie?—AUNT JANE.)

DEAR AUNT JANE:

I am a little girl eight years old. I would like to join your circle. My grandpa takes The American Thresherman and Farm Power. I like to read the Boys' and Girls' Page. I have one sister named Ethel. She is

six years old. This is my second year in school. I did not miss a day of school last winter, and I have not missed so far this year. My teacher's name is Miss Ruth Neff. I have two dolls. Their names are Dorothy and Harry. Enclosed you will find a picture which I am sending of myself. I will close as my letter is getting long. I hope to see it in print as I want to surprise my papa.

I remain, Your niece,

ALMA V. KAUFFMAN.

Fayetteville, Penn.

(Your picture will be published when its "turn" comes, Alma. Thank you for it.—AUNT JANE.)

DEAR AUNT JANE:

This is my first letter to you. I am eight years old. My birthday is the twelfth of February. I am in the fourth grade at school and my teacher's name is Edith Root. My papa takes The American Thresherman and Farm Power and I like to read the Children's Page. I have four sisters and two brothers. Their names are Rose, Lucy, Kathrine, Helen, Randolph and Roman. For a pet I have a dog named Snowball. I will close for my letter is getting long. I hope to see it in print.

Your niece,

MARIE ANGELA OECHSNER.

Oakfield, Wis.

(Does "Snowball" keep cool in summer?—AUNT JANE.)

For Sale and Want Department

If your engine is too small or somewhat worn, if you have a thresher, feeder, stacker, shredder, sheller, cream separator, baler, wood saw, farm land, or anything else that you would like to get rid of—

Let us help you sell it

A "For Sale" ad in these columns will put you in instant touch with thousands of men, among whom there is sure to be a goodly number who are anxious to buy just what you have to sell. You can also find just what you want if you will advertise your wants in these columns.

Fix up a little ad for the next issue and start things moving right away. Quick sales come from our "For Sale and Want Ads" and the cost is only trifling when you consider the service.

Twelve cents a word each month. Remittance to accompany order. Copy for this department must be in our hands by the first of the month.

POSITIONS WANTED

WANTED—Position running a tractor anywhere. Northwest preferred. Name tractor and wages. Ed. Ross, R. 2, Chalmers, Ind.

WANTED—Position running steam or gasoline engine in the West; twelve years' experience. A. A. Becker, Lancaster, Wis.

WANTED—All summer job operating 25-50 or 40-80 Avery. Eight years' experience. State wages, also board conditions. M. W. Newhouse, Kingston, Ohio.

WANTED—Position as engineer in saw-mill or elsewhere, by graduate of the Clarke School of Traction Engineering. Address Robt. Darling, R. 3, Shawano, Wis.

POSITION WANTED—Expert boiler welding. Don't scrap that engine. Cracks, bulges, patches, staybolts; work guaranteed. Will call anywhere. Make dates now. Wire or write. A. A. Koch, Albert Lea, Minn.

HELP WANTED.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

FOR SALE

FOR SALE—New stump puller. Ray Van Doren, Burr Oak, Mich.

FOR SALE—Rockwood sawmill, complete, three saws. M. H. Crates, Jenera, Ohio.

FOR SALE—25-H. P. Huber steam engine, \$600. J. E. McLaughlin, Dunseith, N. D.

FOR SALE—16-H. P. Advance engine; 16-H. P. Rumely, like new. Wm. Vandre, Mendota, Ill.

FOR SALE—Steel Ruth feeder, 36-inch in good running order. Price \$50. Davis Bros., Sedgwick, Kans.

FOR SALE—Cape New Model separator, 30x50, used one season. M. Lautzenheiser, Maximo, Ohio.

FOR SALE—J. I. Case 50-H. P. engine, No. 29766, fine shape, cheap. E. C. Foote, Irvington, Ky.

FOR SALE—25-H. P. Reeves engine No. 2266, A-1 condition; \$1200 for quick sale. Frank Haiduch, Martinsburg, Mo.

FOR SALE OR TRADE—One Huber tractor, large motor, like new. What have you? D. K. Roth, Gibson City, Ill.

FOR SALE—36x56 Peerless separator, feeder, weigher, blower and belts. J. A. Voyles, New Douglas, Ill.

FOR SALE—One eight-bottom Avery self-lift plow, in good condition. E. L. Bolland, Pierpont, S. D.

FOR SALE—18-H. P. Aultman & Taylor engine; three section drag for Western sheller. Geo. Rosander, Perry, Ia.

FOR SALE—Pitts double 18-horse engine and Case 40x62 separator. Chas. Wycoff, Wyoming, Ill.

FOR SALE OR TRADE—Thirty-five acres, partly improved. Want hay baler. H. Little, Gordon, Wis.

FOR SALE—Canton three-bottom engine plow. Would exchange for motorcycle. L. B. 603, Manhattan, Mont.

FOR SALE CHEAP—New Avery tractor and Morris cash register. Will Sheridan, Sutton, Nebr.

FOR SALE—16-30 Model F Eagle tractor, completely overhauled, priced right. Chas. Merrill, Kaneville, Ill.

FOR SALE—One 40-inch Ruth feeder and one Gandy drive belt. J. R. Hanson, Egeland, N. D.

FOR SALE—15-30 Townsend tractor; plowed thirty acres; like new. Fred Narber, R. 2, La Porte City, Ia.

FOR SALE—Garden City feeder and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—One Wallis and two All-work tractors. Emil Harding, Lowell, Ind.

FOR SALE OR TRADE—9-18 tractor; plowed about two hundred acres. What have you? H. A. Gullickson, Strool, N. Dak.

FOR SALE OR TRADE—One new Day-Elder 1½-ton truck, 1920 model, 25% discount. Everson & Bergeson, Platte, S. D.

FOR SALE—One new No. 2 De Loach sawmill, complete with 44-inch inserted tooth saw. \$275. Martin Haller, Wanamingo, Minn.

FOR SALE—One Case 15-27 Grand Detour three-plow outfit, new. At cost to close out stock. D. O. Morris, Forrest, Ill.

FOR SALE—Rumely automatic eight-bottom plow. Will trade for No. 1 team within reasonable distance. W. A. Sommerlot, Liscomb, Ia.

FOR SALE—Number 9 Bowsher feed grinder with bagger and new plates; a bargain. Chancey Hochstetler, Nappanee, Ind.

FOR SALE—High tension tractor, auto and truck magnetos. Guaranteed. \$20 each while they last. D. W. Newhouse, Kingston, O.

FOR SALE—Avery 18-H. P. double; 36x60 separator; Turner 14-25 tractor; Stanley steam automobile; Ford truck. John Peitz, West Point, Ia.

FOR SALE—One three-bottom P & O plow, \$100. One 10-foot P & O tandem disc, \$150. One four-roll Appleton shredder, used twelve days, \$300. N. A. Johnson, Tampico, Ill.

FOR SALE—25-H. P. portable sawmill outfit, 25-50 Nichols & Shepard tractor and separator. Also 28-and 30-inch separators and engines. H. M. Surbey, 99 Tailor Ave., Akron, Ohio.

FOR SALE OR TRADE FOR LAND—Outright or royalty, bean harvester patent, U. S. No. 1284737; Canadian No. 198969. Carl A. Martin, Genoa, Colo.

FOR SALE—Westinghouse 15-H. P. steam tractor and No. 3 Standard saw-mill. All in good condition. Noel Harned, Edinboro, Pa.

FOR SALE—First-class Bull tractor, coal oil attachment; one five-bottom P & O engine gang plow, in good shape. John L. Taylor, Farmingdale, Ill.

FOR SALE—15-27 Case 1920 tractor in first-class running order. Never been exposed to the weather. Price \$1450. John B. Jones, Murfreesboro, Tenn.

FOR SALE OR TRADE—One 15-45 Case steam engine and one 10-20 Titan tractor. Will sell cheap. Wm. Hansen Auto Co., Dixon, Ia.

FOR SALE—Good parts and belts; Case 36x58 wood frame separator with Sattley stacker, Caswell guide and reel. Cheap. L. T. Lutter, Schaller, Ia.

FOR SALE CHEAP—18-H. P. Huber contractor type engine, jacketed boiler, power guide, and heavy geared. P. G. Plummer, Lansing, Mich.

FOR SALE CHEAP—Six-bottom Case power-lift plow. Plowed 175 acres. Want cylinder corn sheller. J. J. Waterman, Adrian, Minn.

FOR QUICK SALE, CHEAP—35-70 Minneapolis tractor; Avery separator complete and Rumely huller, all in good shape. Chas. E. Hermon, McComb, Ohio.

FOR SALE—24-H. P. Port Huron compound engine, 36x60 Avery separator, in first class condition, with new Langdon feeder. Mrs. Sarah A. Parkin, Manito, Ill.

FOR SALE—20-H. P. Advance; 20-H. P. return flue Avery; 36x60 Reeves separator; 36x58 Case. Frank Serrine, Granville, Ill.

FOR SALE—Two 36-inch Avery feeders, one Ruth; Gardner weigher; Peoria loader, swinging conveyors; O. C. Marsh steam pump. Evans Bros., Sandwich, Ill.

FOR SALE—Advance separator in A-1 condition, \$500; two Aultman & Taylor hullers, like new; 20-H. P. Advance engine. James Galbraith, Burney, Ind.

FOR SALE—520 acres, farm, corn, wheat, alfalfa and bluegrass land. St. Joseph and Branch counties, Michigan. Ray Van Doren, Burr Oak, Mich.

FOR SALE—Avery 18-H. P. under-mounted; 32x50 Aultman & Taylor separator; eight-roll McCormick shredder. Ben Fox, R. 8, Seymour, Ind.

FOR SALE OR TRADE—18-H. P. Minneapolis straight flue engine; 16-H. P. Reeves double simple, in fine condition. Want 15-30 to 20-40 tractor. H. E. Sherman, Waverley Nebr.

FOR SALE—32-inch Case steel separator, good shape, \$350; one new Oliver two-gang, fourteen-inch plow, \$125. Wanted—15-30 or 20-40 tractor. M. E. Woolcott, Watervliet, Mich.

FOR SALE OR TRADE—Case 15-40 steamer, in good condition. Would trade for about 26-80 steamer. Must be in good shape. W. H. Gandy, Hastings, Okla.

FOR SALE—28-30-32-inch Garden City; 24-32 Ruth, Ohio agency for Heineke feeders; 32-inch Perfection and New Improved. Same as new. Belting and weighers. A. C. Staffin, Sidney, Ohio.

FOR SALE—One 18-H. P. Avery under-mounted; one 32x54 Avery separator; one 22 Minneapolis return flue; one 40x62 steel Case separator. Wm. Seyb, Donnellson, Ia.

FOR SALE OR TRADE—Duplex 3½ ton four-wheel drive truck, in good shape. Would take a 15-20 H. P. steam traction engine. R. A. Livezey, Barbour's Creek, Va.

FOR SALE—20-40 Case tractor, good as new, run about one-hundred and forty days. \$1700, bankable guarantee. H. F. Gorgus, 409 W. Second St., Hastings, Minn.

FOR SALE—Monarch tractor, 18-24 Caterpillar, new. A bargain. Will take small wheel tractor in trade. Jas. Brunkhan, Dyersville, Ia.

FOR SALE—Ten-roll Case shredder, good condition, \$300. 14-H. P. Stover engine, mounted, \$225. R. L. Dixon, Plymouth, Ia.

FOR SALE—25-H. P. Huber engine and 36x60 separator, tank and all belts. Almost new drive belt. Write or call Oscar Ross, Worthington, Minn.

FOR SALE—A lot of two inch Shelby boiler tubes six and seven feet long. Special bargain for this length. M. E. Howard Boiler Works, Indianapolis, Ind.

BELTS COST MONEY—Have your canvas threshing belts spliced. Money back, guaranteed job. Write for price Geo. B. Teets, Milledgeville, Ill.

FOR SALE—At a bargain—One 10-20 Titan; one three-bottom plow; or eight-foot tandem disk. As I have the selling of same, the highest bidder take it. F. E. Peterson, Kewanee, Ill.

FOR SALE—I have two 8½x10, one 8x10 Frick traction engine and one 33x50 new Peerless separator. Will trade any two for 20- to 25-H. P. engine. Luther Caldwell, Rushville, Ind.

FOR SALE—26-H. P. Port Huron steam engine, good as new, \$1500; 20-40 Case oil tractor and four-bottom plow, in good condition, \$1000. A. Quebbeman, Sellersburg, Ind.

FOR SALE—Wisconsin drained land. Buckeye 4 ditcher; Russell 20 steamer Birdsall 6 huller, Holt 30-60. Wanted—Moline or small Caterpillar, also Baker steamer. H. Lauterbach, Earlville, Ill.

FOR SALE—One Monarch 18-30 tractor, one Oliver four-bottom plow; one Emerson six-furrow disc plow; one Avery six cylinder motor cultivator. All in good condition. Fred Spick, Jefferson, Ia.

FOR SALE—25 Reeves steam engine 40x63 Reeves separator, complete, A shape; Reeves No. 11 corn sheller, nearly new. Write for particulars. Pete Meyer, 412 E. Second St., Webster City, Ia.

FOR SALE—Hart-Parr 15-30 tractor plowed only fifty acres and small amount of other work. Just bought this fall at \$1525. My price \$1025, part cash balance time. Box 47, Claytonville, Ill.

FOR SALE—Smith Form-A-truck for Ford, \$125; stake body and cab for truck \$50; 2½-H. P. gasoline engine, \$25; flexible shaft sheep shearing machine, \$10. W. B. Meeks, Martelle, Ia.

FOR SALE—36x60 Avery with weigher blower, feeder, 22-foot extension; 25-H. P. Peerless steam engine. Must sell—have gone into the garage business. Ralph Pivonka, Timken, Kans.

FOR SALE—One new 15-30 Hart-Parr never been used; one 15-30 Hart-Parr demonstrator, plowed about ten acres. Special prices if sold next thirty days. Montz Bros., Cameron, Mo.

FOR SALE OR TRADE FOR LARGE outfit—16-H. P. Reeves cross compound engine, 28x50 Case steel separator, A-1 condition. Claude Ewings, Elmore, Kans.

FOR SALE—Joliet Big 4 sheller, same as new, all complete with three-section drag; price \$650. C. B., care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—Maytag-Success eight-foot husker-shredder, condition approximates new. Other rebuilt machinery bargains. The Clark Implement Co., Council Bluffs, Ia.

FOR SALE—One Ottawa C sheller; one Joliet sheller; one 2½-H. P. motor; one generator suitable for electric lighting; one shaper and lathe; one Samson with plow; one Fordson and plow. F. E. Peterson, Kewanee, Ill.

FOR SALE—New outfit, used one season. Greyhound grain separator, 38x48 Greyhound bean thresher, 15-30; International kerosene tractor, A-1 condition. Stamp. Hermann Bros., R. 7, Chas. Mich.

FOR SALE—One eight-bottom Avery self-lift engine plow; has plowed only three hundred acres; two full sets shares. Price \$465. Address Mrs. A. S. Burr, Bement, Ill.

FOR SALE—Eighty acres of rich swamp land in Taylor county, Wisconsin; every acre can be drained. Will trade for good farm machinery. D. W. Newhouse, Kingston, Ohio.

FOR SALE—No. 10 Smith Premier typewriter, splendid condition; special price \$50. Address, Bargain Counter, care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE OR TRADE—25-H. P. Case; 16-H. P. Russell, 12-20 OilPull with plow, 36x56 Advance separator. Want a 20-40 OilPull. P. W. Shaw & Son, Box 26, Zion, Ill.

FOR SALE—One 30-60 H. P. Case kerosene and gasoline tractor and one 36x60 Avery separator with Avery self feeder and Peoria weigher and Sattley stacker. Both in A-1 condition. T. Sessous, Mt. Prospect, Ill.

FOR SALE—Swayne-Robinson hay press, 16x18, with self feeder, nearly new. Waterloo Boy tractor in good running order. A bargain. Outfit is at New London, Minn. D. R. Geer, Sand Creek, Mont.

FOR SALE—Case-Sattley six-bottom plow, three-bottom Oliver, both in good condition. Two Frick kerosene tractors; six steam tractions; several threshers; two sawmills. Some good bargains. H. P. Kellogg, Nunda, N. Y.

FOR SALE—Rotary fuel pump, new buzz saw, four-bottom plow, 2-A Western sheller, new drive belts, 500 new N. & S. cylinder teeth, forty-inch feeder, 15-30 Lauson tractor, ten-foot McCormick tandem disc. Harry F. Pick, Chenoa, Ill.

FOR SALE—20-H. P. Rumely single engine; 16-H. P. Stevens; 20-H. P. Gaar-Scott double. Separators—32x56 Advance; 32x54 Avery; 33x56 Gaar-Scott, in good shape. Roy Vail, Clarksburg, Ind.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—17-H. P. Avery engine, return flue; 36x60 Advance separator, new Ruth feeder. This engine and separator will be sold at a bargain for a quick sale. Address J. H. Kenney, 124 S. Capitol Ave., Indianapolis, Ind.

FOR SALE—20-H. P. Gaar-Scott; 16-H. P. Shepard; two Birdsell hullers; 36x58 Nichols & Shepard, two Garden City feeders, size 32 and 40; 32x54 Case, adjustable sieve. Bargain prices. Wanted—small separators. John Davis, Crystal Lake, Ill.

FOR SALE—22-H. P. Minneapolis twin cylinder engine; 40x62 separator; Minneapolis separator; Minneapolis corn sheller; one Mack five-ton truck. This machinery is in good order or will trade steam engine for large tractor. John Tufts, Dwight, Ill.

FOR SALE—One 18-H. P. Robinson engine; one 20-H. P. Nichols & Shepard double engine; one 20-H. P. Baker engine; one 36x60 Baker separator, complete; one 36x60 Advance separator, complete. All at bargain prices. J. A. Cooper, 234-236 W. Maryland St., Indianapolis, Ind.

FOR SALE OR TRADE—16-30 Rumely OilPull tractor, new 1920, disked drilled 300 acres to wheat; all the work it has ever done. I will guarantee it same as new. Has eight-inch extension rims. Tractor under shed. I am traveling, selling machinery, and have no use for this tractor and it goes at a real bargain. J. C. Copsey, Box 374, Hastings, Nebr.

FOR SALE—Two hundred and forty acres land of the best in Montana. One-hundred acres broke 1920, ready for crop 1921. All level and fenced; three and one-half miles from Brockton, on the main line of the Great Northern. Total crop failure unknown. Price \$3600; \$1000 cash, balance long time. Helmer G. Dale, R-1, Climax, Minn.

FOR SALE—At all times, engines, separators, corn shellers. Nearly all makes and sizes, some little separators. One rebuilt Rumely Ideal 36x60 separator, guaranteed. One rebuilt Joliet sheller, No. 3. Two rebuilt Ottawa C. Maybe I have what you want. Come and look them over, or write. Joe Preisser, Ashkum, Ill.

FOR SALE—50-H. P. steam Case engine and 28x50 Case separator with new Heineke self feeder, water wagon with twelve-barrel tank. All in perfect condition, good as new. The outfit is in northwestern Kansas. Price \$3000 f. o. b. Clayton, Kans. Address Chas. Wagner, Subiaco, Ark.

FOR SALE—16-H. P. Peerless engine, like new; 28x48 Huber separator with new feeder and blower, all belts new; one fodder shredder; one 10-20 Titan tractor, used eight days; one Giant two-ton truck with dump and all equipments. Quitting business. H. L. Horner, Box 101, Stoyestown, Penn.

FOR SALE—One 36x60 Northwest separator complete, equipped with Parsons feeder and wings and Farmers' Friend stacker. Separator has been used four seasons by a few farmers and two seasons for custom work. Cash price if taken at once, \$200. Same is easily worth twice that amount. Geiwitz & Son, Minneota, Minn.

FOR SALE—One 25-H. P. single cylinder, top mounted Avery engine, four years old and as good as new. Price \$1950. One 21-H. P. compound Port Huron engine. Is in first-class condition. Price \$900. One 10-20-H. P. Titan tractor, three years old and in very good shape. Price \$500. Write the Wisconsin Farm Tractor Company, Sauk City, Wis.

FOR SALE—25-H. P. Aultman & Taylor steam engine, run two seasons; 36x60 Avery separator, run three seasons; new Rumely huller, has threshed only one hundred and twenty bushels of seed, and Ohio No. 19 silo filler. Machinery in A-1 shape, good as new. Reason for selling, too many small machines. Price \$4000 complete with steel tank, drive belt, canvas. Wm. Frank, Fox Lake, Wis.

FOR SALE—A threshing rig—one Minneapolis 22-H. P. straight flue engine; one 36x56 Aultman & Taylor separator, with new Ruth feeder and wings, nearly new canvas, 24x35; 8-inch rubber drive belt; tank pump and new 20-foot hose; 16-barrel tank; two wagons; dandy new sleeping car with springs, mattress. All in A-1 condition. Price \$3500 for everything. Reason for selling. Hart and Kleven, Caryville P. O., Wis.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six room house; barn 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8500, half cash, balance long time. Object for selling have larger tract which desire to improve. B. B. Clarke, Madison, Wis.

FOR SALE—Engines—One 16-horse rebuilt Huber; one 18-horse Peerless. Separators—One 28x48 Avery; one 33x52 Gaar-Scott; one 33x56 Baker; one 33x56 Robinson Money Maker. All fully equipped; the Avery and Baker practically good as ever. One 8-16 Avery tractor; one No. 1 Birdsell huller, in fine condition; one Silver Ohio and one Belle City silo filler. The great Minneapolis line of threshing machinery and everything for the thresherman in the way of supplies. See us at the Indiana and Ohio Threshermen's Conventions. The Dafler-Moser Co., Richmond, Ind.

FOR SALE—One complete threshing outfit—Port Huron steam engine, 19-65-H. P., and Port Huron separator 33x54; separator with weigher, feeder and fourteen-inch extension carrier. Engine run one fall and separator only about ten days and is good as new. Also one 40-80 H. P. Imperial gas tractor equipped with headlights, whistle and has eight-foot drivers; one 36x60 Avery separator with weigher, wings and feeder. This rig has run only four short seasons and is in first-class running order. Also has one eight power lift tractor plow with stubble plows and breakers plows with extra shares. Write for particulars and prices to C. J. Newhouse, Alexandria, Minn.

FOR SALE—1919 12-25 Avery, never used a week. Paint bright as new. Always under shingled roof. \$850 cash or liberty bonds. 1920 14-28 Avery, used less than two weeks, not worn a particle anywhere. Under shingled roof; looks and runs like new. \$1500 cash or liberty bonds. Will trade either tractor for 5 to 8 hopper cooled stationary or 8 to 12 portable gas engine, or 1919 or 1920 8-16 Avery or 1920 Avery motor cultivator. T. W. Maxwell, Shenandoah, Ia.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5000 or more cash, balance as long as desired, six per cent interest. The pasture alone with timber on the tract would pay for it in a few years. B. B. Clarke (Old Sile), Madison, Wis.

FOR SALE—Rebuilt—one Big Four 30 Model C tractor, \$2000; one 20-35 Model D Emerson tractor, \$1500; one 12-20 Heider tractor, \$750. Steam engines—One 20-H. P. double simple Reeves, double gear, \$2000; one 20-H. P. C. C. double gear Reeves, \$1800; one 20-H. P. C. C. double gear Reeves, \$1500; one 16-H. P. double simple Reeves, double gear, \$1500; one 16-H. P. C. C. Reeves, single gear, \$700; one 20-H. P. single cylinder Nichols & Shepard, \$1000. Also have sixteen separators—Reeves, Peerless and Case. Sizes 24 to 36 inch. Mayberry Bros., Claremore, Okla.

FOR SALE—Below are a few real snaps in rebuilt engines: 19-H. P. Port Huron Compound; 12-25 Port Huron tractor; 8-16 Mogul tractor; 12-H. P. Port Huron engine; 13-H. P. Russell simple; 12-H. P. Nichols & Shepard; 20-H. P. Nichols & Shepard double cylinder; 20-H. P. Port Huron simple; 38-H. P. Port Huron double Compound; 16-H. P. Russell simple; 20-H. P. Rumely double; 16-H. P. Huber; 16-H. P. Advance simple; 18-H. P. Advance compound; 16-H. P. Buffalo Pitts simple. All these engines are in first class condition and ready for immediate shipment. Write us for price and general description. Port Huron Engine & Thresher Co., Port Huron, Mich.

FOR SALE OR TRADE—One 25-H. P. double simple Nichols & Shepard Canadian Special; 26-H. P. Advance; 40-H. P. Advance; 22-H. P. Advance; 20-H. P. Advance; 16-H. P. Advance; 20-H. P. Gaar-Scott; 16-H. P. double simple Rumely; two 40-80 Avery tractors. Also all other size Avery tractors; two Heiders. All sizes Avery separators. Peoria, Hart and Simplex weighers. A 36-inch and a 32-inch double spiked Avery cylinder and shaft cheap. Several sets of separator trucks. One Reeves mill, cheap. Two three-ton Avery trucks for sale. Also one five-ton Avery. An Oakland 6 touring car to trade for one-ton Ford truck with pneumatic tires. Must be late model and A-1 condition. One 18-H. P. Case, Canadian Special, good as new. All machinery here at warehouse. Frank L. Brown, 14 and 16 E. New St., Coffeyville, Kans.

FOR SALE OR TRADE—Twin City 25-45 tractor, \$750; Hart-Parr 40-B. H. P. Tractor, \$750; Hart-Parr 35 tractor, \$750; Fairbanks-Morse 15-25 tractor, \$550; Little Giant 16-22, \$800; Huber 12-25, \$600; Avery 12-25, \$600; Heider 12-20, \$700; 3-14" Oliver self lift engine plow, \$100; 3-14" Grand Detour engine plow, plowed fifteen acres, \$160; fourteen-inch Smalley feed cutter, like new, \$75; eighteen-inch Appleton silo filler with pipe for forty-foot silo, \$125; two-hole Keystone sheller, feeder, cobstacker, wagon elevator, steel trucks, \$100; four-hole Marseilles sheller on trucks, \$125; 15-H. P. Case steam tractor, \$350; ten-inch International feedmill, like new, \$25; 6-H. P. portable Witte engine, \$50; 13" 8' bed Barnes engine lathe, \$200; 36x60 Avery separator complete, \$300; 42x64 Avery separator complete, \$300; ten-roll Plano shredder, \$100; two-ton Jeffrey Quad truck, \$750; Chevrolet 490 touring car, \$300; one McCormick corn picker, \$150; 24x42 Huber Junior separator, run fifteen days, \$950; one sixteen-inch Rosenthal silo filler run about fifteen days, \$250; power hacksaw, \$10. Wanted—about eighteen-inch swing by ten-foot bed engine lathe and portable sawmill. J. P. Hansen, St. Ansgar, Ia.

FOR SALE—Two Case 9-18, one Case 12-25, one Titan 10-20, one Heider 12-25, tractors, in good condition. One Advance-Rumely Model F, fair condition; a bargain. One Advance-Rumely 20-40, used one season, factory rebuilt. One Advance-Rumely 20-40 and 32x52. Advance-Rumely separator, used only one season on one farm (farm sold), a bargain. One Rumely 12-horse, one Leader 12-horse, steam engines. One 20-horse Star steam engine at junk price. One Advance-Rumely steel separator, used one season, factory rebuilt, 36x60. Price right. One Avery 36x60, used eight seasons; will do great deal of work with very little repair. Several two-and three-bottom Case Plow Company tractor plows, new and used. One each ten-and fifteen-barrel steel tanks, in very good condition; also have pump and hose. G. B. Holmes, Union Mills, Ind.

MISCELLANEOUS

WANTED—Buckeye traction ditcher. M. H. Crates, Jenera, Ohio.

WANTED—25-50 Avery tractor. O. E. Hathaway, Montezuma, Ia.

WANTED—Tractor breaking plow. Arvid Friberg, Frederic, Wis.

WANTED—A bargain in a steam or gas tractor. W. E. Toler, Pawnee, Okla.

TO SELL machinery or other property write, C. C. Shepard, Minneapolis.

WANTED—Extension rims for Aultman & Taylor 30-60 tractor. J. W. Ault, Ayrshire, Ia.

WANTED—Crankcase for Hart-Parr 30-60 tractor. Elmer Barnes, Yates Center, Kans.

WANTED—Ten-bottom self-lift plow or breaker; OilPull 30-60. V. R. Snow, Sibley, Ia.

WANTED—Separator, tandem disc engine plow. State make and price. H. Dearlove, Glen View, Ill.

WANTED—19-H. P. return flue Minneapolis engine, in good condition. Give number. Bert W. Johnson, Galva, Ill.

WANTED—30-60 or larger tractor. State condition and lowest price. J. F. Dyer, Braceville, Ill.

WANTED—Buckeye tile ditcher. Will pay cash for machine in good condition. Adrian Hull, Avoca, Mich.

WILL TRADE steam engine for gas tractor, Avery or Rumely. Will Sheridan, Sutton, Nebr.

CATALOGS WANTED—From concerns selling drag saw outfits. John J. Smith, R. 2, Box 33, Galveston, Ind.

REBUILT SAWMILL, cider press, boilers, steam and gas engines. Roberts Machine Co., East Palestine, Ohio.

WANTED—Good 22-or 25-H. P. steam engine, Gaar-Scott or Reeves double preferred. P. A. Kehrer, New Memphis, Ill.

SLIGHTLY USED TRACTORS—Heider, Wallis Cub, Parrett. Special price. Indiana Triangle Motors Co., 155 Kentucky Ave., Indianapolis, Ind.

WANTED—A set of Joliet single chain drags with Horine drive. Want a good truck in exchange for threshing rig. Joe Preisser, Ashkum, Ill.

SPECIALS—Minneapolis threshing outfits, boilers, engines and sawmills, at Barker's Machinery Exchange, Jamestown, N. Y.

WANTED TO HEAR FROM OWNER of good farm for sale. State cash price full description. D. F. Bush, Minneapolis, Minn.

WANTED—Secondhand left-hand drive wheel 69-inches high, 20-inch face; steel rim cast hub for 20-H. P. Nichols & Shepard engine. A wheel from the 18-H. P. will fit. C. H. Thomas, Ashton, Ill.

WANTED—Rear drive wheel for Avery 22-H. P. return flue, 75-inch diameter 20-inch face, hub No. 1014, bull gear No. 1076. D. W. Johanning, R. 1, Baldwin, Kans.

WANTED—A good 30- or 40-H. P. portable engine. Also 20- or 25-H. P. late Gaar-Scott traction engine with axle back of boiler. Roy Vail, Clarksburg, Ind.

WANTED—Countershaft pinion and bevel gear No. 1084½Z; one pinion No. 1085½Z for 20-H. P. Northwest engine. John Flom, Hemming, Minn.

WANT TO HEAR from party having farm for sale. Give particulars and lowest price. John J. Black, 237th St., Chippewa Falls, Wis.

FORGES AND DRILLS—Farm use sizes at bargain prices. Send for booklet Harris Machinery Company, Minneapolis, Minn.

CIRCULAR SAWS—All kinds of saws gummed, hammered and straightened. New saws for sale. Crabb Gas Engine Co., Independence, Ia.

CORDWOOD SAWS—Cordwood saws —30-inch guaranteed saw only \$8.40; 26-inch, \$6.40; 28-inch, \$7.40. Other sizes. Harris Machinery Company, Minneapolis, Minn.

I WILL RENT SECTION GOOD Canadian wheat land, also furnish tractor and equipment to capable operator who has money to pay for seed grain and gasoline. C. C. Baldwin, 1700 Stout St., Denver, Colo.

QUICK & THOMAS COMPANY,—Auburn, New York, state agents for Nichols & Shepard threshers and engines, Williams threshers, wonderful Heineke self feeders, Birdsell clover hullers. Everything for the thresherman.

THRESHER BELT BARGAINS—GET our prices on canvas and rubber endless belts. All sizes and lengths. We are low price makers on guaranteed high grade belts. Order now. Harris Machinery Co., Minneapolis, Minn.

BOILER TUBES—BOILER TUBES—Secondhand and new. Money saving prices. Used tubes of high grade, cut to lengths you need. Ship anywhere. Get our prices. Harris Machinery Co., Minneapolis, Minn.

CYLINDERS REBORED—All kinds of tractor, automobile and stationary engine cylinders rebored and fitted with pistons, rings and pins. All kinds of repair parts made to order. Crabb Gas Engine Co., Independence, Iowa.

INSIDE TIRES—Inner armor for automobile tires. Positively prevents punctures and blowouts. Guaranteed double tire mileage. Any tire. Enormous demand. Low priced. Write for particulars. County agents wanted. American Accessories Co., B. 704, Cincinnati, Ohio.

WANTED

AGENTS in every state to sell "The Gospel of Freemasonry" by Uncle Silas. Price \$1 a copy. Guaranteed to give entire satisfaction or money refunded. Proceeds devoted to charity. Address, B. B. Clarke, care Clarke Publishing Co., Madison, Wisconsin.

It was in the Argonne. A regiment of negro pioneers from Dixie who had been inducted into the service had just received a batch of mail. But neither Jefferson Madison Monroe nor his particular side kick, Washington Jones, was manifesting any great elation. In fact, they both looked decidedly in the dumps.

"Wash," mourned Jefferson, "I'se the hard luckin'est nigger what was ever. I done just got a letter from mah gal, and she's gone and went and married another."

"Oh, man, man!" wailed Wash. "You don't know what hard luck am. Me. I just got a letter from the draft board what says I'm exempt."

—Home Sector.

New Chattel Mortgage Law

A concerted movement is being made to have the chattel mortgage law of the various states which now require chattel mortgages to be filed with various township boards, changed, so that they will be filed with the register of deeds, or county recorder, as has been the law for many years in Indiana and a few other states. Such a change in the law should have been made years ago in Wisconsin, Minnesota and other states, and we are glad to note that action is being taken to have these laws changed in those states where the legislatures meet this winter. The Minneapolis Threshing Machine Company deserves credit for having taken the initiative in bringing this matter to the notice of both manufacturers and others. There is but one place to keep county records and that place is the vaults of the county seats. Besides, it simplifies these matters for everybody.

Belt Economics

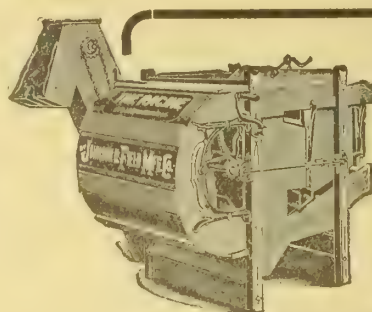
BY W. F. SCHAPHORST

In line with the advance of other materials, belting is holding up its end also, and it is more important than ever that we study belts and power transmission with the utmost care.

It is a well known fact that a double belt, for instance, will not transmit twice as much power as will a single belt, even though it is twice as thick and twice as strong. The reason why is—a single belt has just as much contact with the pulley, as has the double belt, and it is the contact that counts. Besides, the single belt is more flexible. It is also a well known fact that double leather belts cost twice as much as single leather belts of equal width. In view of these facts, therefore, you will readily understand why single belts may often be the most economical selection even though you may have to buy wider pulleys to accommodate the wider belts.

I will just outline the manner in which belts and pulleys should be selected to effect the greatest economy:

First, decide on the kind of belt you are going to use, whether leather or solid woven cotton belting, or other fabric material. The substitute belt is coming into very wide usage these days on account of the high cost of leather, and in some fields the substitute has completely ousted the leather belt. However, there is nothing better than leather for drives where shifters are used, because shifters are rather hard on fabric, tending to unravel the edges and giving the fabric a tattered appearance. On overhead or open drives, where there is no such cutting or wearing obstruction, the substitute belt does very well indeed.



Mention The American Thresherman and Farm Power

TO Farmers and Seed Dealers.

If your dealers do not sell the **FAMOUS RACINE FANNING MILLS** with bagging attachment which enables one man to clean more grain or seed of all kinds than three men can clean with an ordinary mill, write us for information how you can own one of these mills without it costing you one dollar. The Racine Fanning Mill has a seed corn grading attachment which takes out butt and tip grains and enables corn planters to drop from 100 to 400 hills without a miss.

JOHNSON & FIELD MFG. CO.
50 17th St., Racine, Wis.

Manufacturers of Farm and Warehouse and Dustless Warehouse Mills

Second, determine the cost of a single belt or equivalent in the substitute belting for transmitting the power that must be carried. This is easily done by multiplying the horse power to be transmitted by eight hundred and dividing by the speed of the belt in feet per minute. This gives the width of the belt in inches. Now consult your manufacturer's catalog and determine the cost of such a belt of the needed length.

Third, determine the cost of the pulleys required for the single belt. The pulley should be a bit wider, of course, than the belt, and they should be strong enough to withstand the load. It is a simple matter to find the cost in any pulley manufacturer's catalog.

Fourth, add the cost of the belt to the cost of the pulleys and you have the cost of a "single belt drive."

Fifth, determine the cost of a double belt or equivalent in the substitute belting field for transmitting the same amount of power as above. This is done by multiplying the horse power to be transmitted by five hundred and dividing by the speed of the belt in feet per minute. This gives the width of the belt in inches. Now consult your manufacturer's catalog and determine the cost of such a belt of the same length as a single belt.

Sixth, do the same as instructed under "Third."

Seventh, add the cost of the double belt to the cost of the pulleys for the double belt and you have the cost of a "double belt drive."

Eighth, compare the cost of the "single belt drive" with the cost of the "double belt drive" and you can just about decide the question without any further ado. I have investigated cases where considerable money could have been saved by using single instead of double belts, and when it comes to using triple belts the saving is even more marked. In general, the above method of computation will show the single-belt drive to be the most economical, the double to come next, and so on. The thicker the belt the poorer the transmission power per dollar invested.

As for what thickness is best, we often read inflexible statements with reference to belts, that a double or triple belt must be used on such and such a drive. Statements of that kind are often far from the truth. I am not stating here what is best. I

merely submit these data for your consideration and you may use your own judgment. I will add, in closing, that thick belts should never be used on small pulleys. The reason why is obvious.

The Crosscut Saw

(Continued from page 10.)

mer; and one eight-inch mill bastard file. The jointer is a tool made to hold an eight-inch mill bastard file (see Fig. 2). The file in the jointer is then passed over the teeth points so that all will be of uniform height, and afterwards the teeth are beveled and sharpened.

To illustrate the procedure necessary to maintain the correct length of raker teeth, see Fig. 3.

Please bear in mind the fact that the jointer must hold the file per-



Fig. 8.

fectly square with the bearing surfaces; these surfaces operate against the side of the blade or saw.

Next we come to the setting blocks. They are of three kinds, as illustrated by Fig. 6. One must have a setting gauge as shown in Fig. 5, and a setting hammer like the illustration in Fig. 7. These essential tools are made by reliable firms and can be purchased from any first-class hardware dealer.

Coming to the methods employed in actually fitting the teeth, it should be borne in mind that they represent a series of very sharp chisels, and they are set alternately right and left, with a raker or plowing tooth slightly shorter than the chisel cutting teeth so as to lift the chip in the kerf, which is severed on each side by the cutter teeth, as shown in Fig. 8.

When you can fit your crosscut saw to cut like the one illustrated you can rest assured that you are accomplishing results.

(Editor's Note: The author, T. A. Carroll, has offered any reader who may desire it, an illustrated treatise on saw fitting. His home address is 106 Th Canterbury, Indianapolis, Indiana.)

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The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON WIS.

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S-P-ENG-CO-MIL



The Belt That Delivers Full Power
GOODYEAR-KLINGTITE BELT Transmission

Copyright 1921, by The Goodyear Tire & Rubber Co.

The Test of Tractor Power and Goodyear Belts

On a typical farm of 125 acres, near Cleveland, Ohio, The Cleveland Tractor Company tests farm power implements for economy, efficiency, and general range of usefulness.

All the common forms of farm products ordinarily raised in the Middle West are grown on this farm, including corn, wheat, oats, rye and buckwheat. All such power operations as threshing, ensilage-cutting, feed-grinding and wood-sawing are carried on. The farm is self-sustaining.

Belting is a factor of first importance, of course, in the use of farm power, and here it has been given careful consideration. It has been repeatedly observed that the efficiency of the power source and the powered implement depends on the certainty with which the belt holds the pulleys, the trouble-free action with which it runs, and the independence it shows of weather and wear.

One belt that was tried here went to pieces early in its career due to the breaking of the stitching. Another was addicted to slipping, exerting on the engine bearings and separator mechanism a jerking, injurious action. It gave so much trouble that

the bundles had to be divided and fed into the thresher slowly, greatly impairing the working efficiency of the machines.

A Goodyear Klingtite Belt gave good service from the moment it was put on. It needed no breaking in; required no belt dressing. It did not slip, but delivered full head of power even in the threshing of heavy rye straw, admitted by farmers to be the toughest of separator duty, excepting, possibly, the threshing of rice. Though exposed frequently to rain and dew during its two or three months of daily operation, it did not stretch. Unstitched, it did not separate at the plies, but wore with uniform evenness.

As a result of this experience, The Cleveland Tractor Company is convinced that the ideal belt for farm power transmission is the Goodyear Klingtite Belt. It so tells dealers and farmers. The Goodyear Klingtite Belt, like Goodyear Cord Tires for motor trucks, is built to protect our good name. You will find it the best help on the farm. For further information about Goodyear Belts, and for a copy of the Goodyear Farm Encyclopedia, write to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR
KLINGTITE BELTS

The AMERICAN THRESHERMAN AND FARM POWER



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Chart of Recommendations for TRACTORS

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"

B means Gargoyle Mobiloil "B"

BB means Gargoyle Mobiloil "BB"

Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

Tractor, 1929	1920	1910	1918	1917	1910
NAMES OF TRACTORS	Summer	Summer	Summer	Summer	Summer
Allis-Chalmers General Purpose	A	A	A	A	A
All Other Models	A	A	A	A	A
All Work	B	B	B	B	B
Appleton	B	B	B	B	B
" (1924-25)	B	B	B	B	B
" (1925-30) (Waukegan Eng.)	B	B	B	B	B
" All Other Models	B	B	B	B	B
Avery	A	A	A	A	A
" Minor Cut and/or Planter	A	A	A	A	A
" All Other Models	A	A	A	A	A
Bates Steel	B	B	B	B	B
" (1920-21)	B	B	B	B	B
" (1922-25)	B	B	B	B	B
" (1925-26)	B	B	B	B	B
" (1927-28)	B	B	B	B	B
" (1929-30)	B	B	B	B	B
" (1931-32)	B	B	B	B	B
" (1933-34)	B	B	B	B	B
" (1935-36)	B	B	B	B	B
" (1937-38)	B	B	B	B	B
" (1939-40)	B	B	B	B	B
" (1941-42)	B	B	B	B	B
" (1943-44)	B	B	B	B	B
" (1945-46)	B	B	B	B	B
" (1947-48)	B	B	B	B	B
" (1949-50)	B	B	B	B	B
" (1951-52)	B	B	B	B	B
" (1953-54)	B	B	B	B	B
" (1955-56)	B	B	B	B	B
" (1957-58)	B	B	B	B	B
" (1959-60)	B	B	B	B	B
" (1961-62)	B	B	B	B	B
" (1963-64)	B	B	B	B	B
" (1965-66)	B	B	B	B	B
" (1967-68)	B	B	B	B	B
" (1969-70)	B	B	B	B	B
" (1971-72)	B	B	B	B	B
" (1973-74)	B	B	B	B	B
" (1975-76)	B	B	B	B	B
" (1977-78)	B	B	B	B	B
" (1979-80)	B	B	B	B	B
" (1981-82)	B	B	B	B	B
" (1983-84)	B	B	B	B	B
" (1985-86)	B	B	B	B	B
" (1987-88)	B	B	B	B	B
" (1989-90)	B	B	B	B	B
" (1991-92)	B	B	B	B	B
" (1993-94)	B	B	B	B	B
" (1995-96)	B	B	B	B	B
" (1997-98)	B	B	B	B	B
" (1999-00)	B	B	B	B	B
" (2001-02)	B	B	B	B	B
" (2003-04)	B	B	B	B	B
" (2005-06)	B	B	B	B	B
" (2007-08)	B	B	B	B	B
" (2009-10)	B	B	B	B	B
" (2011-12)	B	B	B	B	B
" (2013-14)	B	B	B	B	B
" (2015-16)	B	B	B	B	B
" (2017-18)	B	B	B	B	B
" (2019-20)	B	B	B	B	B
" (2021-22)	B	B	B	B	B
" (2023-24)	B	B	B	B	B
" (2025-26)	B	B	B	B	B
" (2027-28)	B	B	B	B	B
" (2029-30)	B	B	B	B	B
" (2031-32)	B	B	B	B	B
" (2033-34)	B	B	B	B	B
" (2035-36)	B	B	B	B	B
" (2037-38)	B	B	B	B	B
" (2039-40)	B	B	B	B	B
" (2041-42)	B	B	B	B	B
" (2043-44)	B	B	B	B	B
" (2045-46)	B	B	B	B	B
" (2047-48)	B	B	B	B	B
" (2049-50)	B	B	B	B	B
" (2051-52)	B	B	B	B	B
" (2053-54)	B	B	B	B	B
" (2055-56)	B	B	B	B	B
" (2057-58)	B	B	B	B	B
" (2059-60)	B	B	B	B	B
" (2061-62)	B	B	B	B	B
" (2063-64)	B	B	B	B	B
" (2065-66)	B	B	B	B	B
" (2067-68)	B	B	B	B	B
" (2069-70)	B	B	B	B	B
" (2071-72)	B	B	B	B	B
" (2073-74)	B	B	B	B	B
" (2075-76)	B	B	B	B	B
" (2077-78)	B	B	B	B	B
" (2079-80)	B	B	B	B	B
" (2081-82)	B	B	B	B	B
" (2083-84)	B	B	B	B	B
" (2085-86)	B	B	B	B	B
" (2087-88)	B	B	B	B	B
" (2089-90)	B	B	B	B	B
" (2091-92)	B	B	B	B	B
" (2093-94)	B	B	B	B	B
" (2095-96)	B	B	B	B	B
" (2097-98)	B	B	B	B	B
" (2099-00)	B	B	B	B	B
" (2101-02)	B	B	B	B	B
" (2103-04)	B	B	B	B	B
" (2105-06)	B	B	B	B	B
" (2107-08)	B	B	B	B	B
" (2109-10)	B	B	B	B	B
" (2111-12)	B	B	B	B	B
" (2113-14)	B	B	B	B	B
" (2115-16)	B	B	B	B	B
" (2117-18)	B	B	B	B	B
" (2119-20)	B	B	B	B	B
" (2121-22)	B	B	B	B	B
" (2123-24)	B	B	B	B	B
" (2125-26)	B	B	B	B	B
" (2127-28)	B	B	B	B	B
" (2129-30)	B	B	B	B	B
" (2131-32)	B	B	B	B	B
" (2133-34)	B	B	B	B	B
" (2135-36)	B	B	B	B	B
" (2137-38)	B	B	B	B	B
" (2139-40)	B	B	B	B	B
" (2141-42)	B	B	B	B	B
" (2143-44)	B	B	B	B	B
" (2145-46)	B	B	B	B	B
" (2147-48)	B	B	B	B	B
" (2149-50)	B	B	B	B	B
" (2151-52)	B	B	B	B	B
" (2153-54)	B	B	B	B	B
" (2155-56)	B	B	B	B	B
" (2157-58)	B	B	B	B	B
" (2159-60)	B	B	B	B	B
" (2161-62)	B	B	B	B	B
" (2163-64)	B	B	B	B	B
" (2165-66)	B	B	B	B	B
" (2167-68)	B	B	B	B	B
" (2169-70)	B	B	B	B	B
" (2171-72)	B	B	B	B	B
" (2173-74)	B	B	B	B	B
" (2175-76)	B	B	B	B	B
" (2177-78)	B	B	B	B	B
" (2179-80)	B	B	B	B	B
" (2181-82)	B	B	B	B	B
" (2183-84)	B	B	B	B	B
" (2185-86)	B	B	B	B	B
" (2187-88)	B	B	B	B	B
" (2189-90)	B	B	B	B	B
" (2191-92)	B	B	B	B	B
" (2193-94)	B	B	B	B	B
" (2195-96)	B	B	B	B	B
" (2197-98)	B	B	B	B	B
" (2199-00)	B	B	B	B	B
" (2201-02)	B	B	B	B	B
" (2203-04)	B	B	B	B	B
" (2205-06)	B	B	B	B	B
" (2207-08)	B	B	B	B	B
" (2209-10)	B	B	B	B	B
" (2211-12)	B	B	B	B	B
" (2213-14)	B	B	B	B	B
" (2215-16)	B	B	B	B	B
" (2217-18)	B	B	B	B	B
" (2219-20)	B	B	B	B	B
" (2221-22)	B	B	B	B	B
" (2223-24)	B	B	B	B	B
" (2225-26)	B	B	B	B	B
" (2227-28)	B	B	B	B	B
" (2229-30)	B	B	B	B	B
" (2231-32)	B	B	B	B	B
" (2233-34)	B	B	B	B	B
" (2235-36)	B	B	B	B	B
" (2237-38)	B	B	B	B	B
" (2239-40)	B	B	B	B	B
" (2241-42)	B	B	B	B	B
" (2243-44)	B	B	B	B	B
" (2245-46)	B	B	B	B	B
" (2247-48)	B	B	B	B	B
" (2249-50)	B	B	B	B	B
" (2251-52)	B	B	B	B	B
" (2253-54)	B	B	B	B	B
" (2255-56)	B	B	B	B	B
" (2257-58)	B	B	B	B	B
" (2259-60)	B	B	B	B	B
" (2261-62)	B	B	B	B	B
" (2263-64)	B	B	B	B	B
" (2265-66)	B	B	B	B	B
" (2267-68)	B	B	B	B	B
" (2269-70)	B	B	B	B	B
" (2271-72)	B	B	B	B	B
" (2273-74)	B	B	B	B	B
" (2275-76)	B	B	B	B	B
" (2277-78)	B	B	B	B	B
" (2279-80)	B	B	B	B	B
" (2281-82)	B	B	B	B	B
" (2283-84)	B	B	B	B	B
" (2285-86)	B	B	B	B	B
" (2287-88)	B	B	B	B	B
" (2289-90)	B	B	B	B	B
" (2291-92)	B	B	B	B	B
" (2293-94)	B	B	B	B	B
" (2295-96)	B	B	B	B	B
" (2297-98)	B	B	B	B	B
" (2299-00)	B	B	B	B	B
" (2301-02)	B	B	B	B	B
" (2303-04)	B	B	B	B	B
" (2305-06)	B	B	B	B	B
" (2307-08)	B	B	B	B	B
" (2309-10)	B	B	B	B	B
" (2311-12)	B	B	B	B	B
" (2313-14)	B	B	B	B	B
" (2315-16)	B	B	B	B	B
" (2317-18)	B	B	B	B	B
" (2319-20)	B	B	B	B	B
" (2321-22)	B	B	B	B	B
" (2323-24)	B	B	B	B	B
" (2325-26)	B	B	B	B	B
" (2327-28)	B	B	B	B	B
" (2329-30)	B	B	B	B	B
" (2331-32)	B	B	B	B	B
" (2333-34)	B	B	B	B	B
" (2335-36)	B	B	B	B	B
" (2337-38)	B	B	B	B	B
" (2339-40)	B	B	B	B	B
" (2341-42)	B	B	B	B	B
" (2343-44)	B	B	B	B	B
" (2345-46)	B	B	B	B	B
" (2347-48)	B	B	B	B	B
" (2349-50)	B	B	B	B	B
" (2351-52)	B	B	B	B	B
" (2353-54)	B	B	B	B	B
" (2355-56)	B	B	B	B	B
" (2357-58)	B	B	B	B	B
" (2359-60)	B	B	B	B	B
" (2361-62)	B	B	B	B	B
" (2363-64)	B	B	B	B	B
" (2365-66)	B	B	B	B	B
" (2367-68)	B	B	B	B	B
" (2369-70)	B	B	B	B	B
" (2371-72)	B	B	B	B	B
" (2373-74)	B	B	B	B	B
" (2375-76)	B	B	B	B	B
" (2377-78)	B	B	B	B	B
" (2379-80)	B	B	B	B	B
" (2381-82)	B	B	B	B	B
" (2383-84)	B	B	B	B	B
" (2385-86)	B	B	B	B	B
" (2387-88)	B	B	B	B	B
" (2389-90)	B	B	B	B	B
" (2391-92)	B	B	B	B	B
" (2393-94)	B	B	B	B	B
" (2395-96)	B	B	B	B	B
" (2397-98)	B	B	B	B	B
" (2399-00)	B	B	B	B	B
" (2401-02)	B	B	B	B	B
" (2403-04)	B	B	B	B	B
" (2405-06)	B	B	B	B	B
" (2407-08)	B	B	B	B	B
" (2409-10)	B	B	B	B	B
" (2411-12)	B	B	B	B	B
" (2413-14)	B	B	B	B	B
" (2415-16)	B	B	B	B	B
" (2417-18)	B	B	B	B	B
" (2419-20)	B	B	B	B	B
" (2421-22)	B	B	B	B	B
" (2423-24)	B	B	B	B	B
" (2425-26)	B	B	B	B	B
" (2427-28)	B	B	B	B	B
" (2429-30)	B	B	B	B	B
" (2431-32)	B	B	B	B	B
" (2433-34)	B	B	B	B	B
" (2435-36)	B	B	B	B	B
" (2437-38)	B	B	B	B	B
" (2439-40)	B	B	B	B	B
" (2441-42)	B	B	B	B	B
" (2443-44)	B	B	B	B	B
" (2445-46)	B	B	B	B	B

Farming Costs and Farm Profits

Some enlightening figures on both subjects

RESULTS of an investigation made by the Department of Agriculture show that in the last seven years the average return on farm investment increased from 4% to 7%. The Department found, however, that in spite of the comparatively higher prices paid for farm products, few farmers made more than \$500 cash a year; over and above the things the farm furnished toward the family living.

These figures are eloquent.

The modern farmer who is fully alive to the possibilities of his investment will see a close connection between these figures and the reduction of operating expense. On farm machinery alone it is often possible to effect a saving of astonishing size in the course of a single year.

Prominent engineers state that over 50% of all engine repairs on auto-

mobiles, trucks and tractors are due to incorrect lubrication.

In hundreds of tests Gargoyle Mobil-oils, when used as specified in our Chart of Recommendations, have shown savings in oil ranging from 50% to 70%, and fuel economies of 17% to 25%.

Lubrication, which seems a small item, is the most important factor in farm machinery operating costs—particularly tractors, trucks and automobiles. Scientific lubrication means longer life, fewer repairs, and slower depreciation.

The Vacuum Oil Company is known the world over as the leader in the science of lubrication. Gargoyle Mobil-oils when used as specified in our

Chart of Recommendations (shown in part on this page) enable you to get utmost efficiency from your tractor, truck and automobile.



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A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

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NEW YORK, U.S.A.

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, FEBRUARY, 1921.

No. 10.

Why I Want My Own Rig

By a Well-Paid Employee

FOR about fourteen autumns I have been "hired man" for some separator boss or engineer. I have worked hard to learn the game right. Some of my years have been spent with men who knew a lot about threshing, and some of the time I helped my boss find out things he didn't know. During these years I have saved what I could, but so far have not been able to get cash on hand for the sort of outfit I want. I have read the correspondence columns many times in this magazine. Most men seem to think they have all the troubles with deciding on prices and paying insurance and taxes. I wonder if they ever stopped to think of the boys who are still merely hoping the day will soon come when they can actually call an outfit their own?

In order to let you understand how long this ambition has been growing, I shall try to tell something of my history.

My first job was hauling water. My father was the engineer and we had an exceptionally good boss. He had a new outfit, which consisted of a 20-horse power St. Croix steamer and a 36x58 Northwestern separator. I was then about thirteen years of age and pretty proud of my job. I do not now remember the wages I received. I learned quite a lot about the engine that fall. It was equipped with a two-wheel tender. Sometimes while the men of the crew were at dinner and the rig was close to the house, I would drive the engine to the coal pile and fill up; then I would clean the flues. This was all very good practice for a beginner.

After getting some experience with this Kansas rig, I went south and threshed rice in southern Texas, about fifty miles from the Gulf of Mexico. For three seasons we used the same rig, which was a 25-horse power steamer and a 36x58 separator. I ran this separator and made five dollars a day and board. That was eight years ago.

The machines for rice work are the same as wheat machines. The rice is sacked for hauling while wheat is dumped loose in the wagon or truck box in Kansas. The rice farming is about the same as that of wheat farming, as far as plowing and planting goes. In some places, the soil is quite hard to plow.

After the first crop, the plowing must be done between the water levees, and the levees rebuilt before watering time. Rice land must be level, as they try to keep from four to six inches of water on the crop for ninety days before harvest. Harvesting is all done with binders.

All the binders that I saw were for a five-foot

cut; and at least six mules, and sometimes an engine, were used on the binder. I have seen binders go through water over the platform in low places where the water didn't drain.

The threshing is all done from the shock. I have never seen any rice stacked. The rice is threshed into big burlap bags that hold about four bushels, and weigh from one hundred and seventy-five to two hundred pounds. From three to five hundred bags a day is what most rigs get. In custom work, about twenty-five days is the limit,

tractor. His tractor implements consist of a big plow with ten fourteen-inch bottoms; two tandem discs, each twenty discs wide; four disc drills, two with twenty discs and the other two with twenty-two discs; five eight-foot binders and a 36x60 thresher.

The first year I worked for this man, we pulled the ten plows, one disc and a three-section harrow. This did a very good job but was a heavy load. The next year we disced a lot of the land and about six hundred acres we allowed to "volunteer" its crop.

This year most of the land was plowed again. The drills work fine on a big truck hitch and plant one hundred acres a day. Last summer he bought five new binders and a patented hitch. He had been harvesting mostly with headers till last summer, and two years ago there was so much straw to handle that the harvesting lasted about all summer, at least it seemed so to us.

Last summer we started as early as the wheat was in shape to bind, and finally we had to lay off for two days to allow the later wheat to get ripe. We certainly got along fine and cut about twelve hours a day. The tractor is nine years old and one afternoon we ran

eight hours without an engine stop. The boss said it was the longest it had ever run without being shut down.

We threshed about twenty thousand bushels last year and then farmed. A lot of the wheat was not shocked, but was hauled in out of the windrow. This man does but very little custom work. As soon as his own grain is threshed, he has his farming to do. When his farming is finished, the best of the custom work is also finished.

Last summer was by far the best for me since I have been in the business. I was paid eleven dollars a day and board. These are good wages, yet I know several men who got as high as twelve and fifteen dollars a day—and many got ten dollars a day.

Custom threshing was high, too, running from fifteen to twenty cents a bushel for wheat. Harvest hands and members of threshing crews got seventy cents per hour.

If I ever get to own a rig, I should prefer paying my crew by the hundred bushels threshed, rather than by the hour. I should try to charge as much as anyone else and collect within ten days after finishing a job. I'd want a 25-horse power tandem compound engine, and a 36x60 separator. I think I could "make threshing pay" in this section. All I ask is a rig such as I have described, to be paid for when bought.

THE life of the ordinary thresherman is full of hardships. Worried by his problems, often he forgets that to scores or maybe hundreds of young farmers and "hired hands" he represents an ambition fulfilled.

To many men a thresherman is a "boss." They are thinking about how he runs his crew; doubtless they often criticise him.

Have you ever given the matter real thought? Here is a chance to hear about the "hired man's" side of it.

on account of not stacking, and for this reason many farmers have their own threshers. The wet climate compels them to put the rice in the warehouses as soon as possible.

Rice can be threshed and cared for while in a much damper condition than a wheat crop will stand. The man I worked for in Texas had several thousand acres of rice and a lot of machines, and he hired Russians to do most of the labor; he also hired some negroes and Mexicans. They were paid twenty dollars and board, per month, and were hired by the year. We American boys would operate the machines and do a lot of plowing with gas tractors. We got sixty dollars per month, board, and two dollars and a half per day extra for threshing. We plowed a field of twelve hundred acres and there were seven tractors, each pulling twelve disc plows, and one hundred and twenty-six mules on sulkeys, all working at once.

I have done quite a lot of plowing sod in western Kansas, with heavy tractors. I have threshed a good deal with gas engines and steamers, too. I have also run separators, but mostly during the last five or six years I have been an engineer.

The last three summers I have spent in Phillips County, Kansas, on a one thousand acre wheat farm. This farmer has a big 30-60 gas tractor and does nearly all his farming with the

English Farm Power Contracts

How Custom Work Has Been Successful

BY ARTHUR G. BLACKMUR

SEVERAL progressive English farmers and stock-raisers had impressed me with their firm belief in the future of the farm power contractor. I made it my business to find one and get his opinions. This took me down to Royston in Herfordshire, the home of the Agri-Tractor Contract Company, a firm which is also the sole concessionaire in Great Britain for a well-known American tractor.

Mr. C. H. Pizey, the director and secretary, explained his views as to the future of contract work. He thinks that at present prices he can very easily compete with horse and steam tackle work. The charges for the various operations are:

Light plowing.....	\$5.50 per acre
Medium plowing.....	6.00 " "
Stiff plowing.....	6.50 " "
Rolling and harrowing.....	1.00 " "
Cultivating once.....	2.00 " "
Cultivating twice.....	3.50 " "

At these rates he finds that he can get all the work necessary to keep his twelve tractors busy. However, he does think that to a certain extent the whole thing is a gamble. For this reason: There is practically no experience to base his depreciation allowance on. At present he is reckoning a four-year depreciation which, although it may seem very high, is not so high as it appears. In England, and in Herfordshire particularly, there are very few days when it is impossible to work a tractor owing to weather conditions. This means a very heavy strain on the finest of tractors and in such cases four years is not too high on the experience available.

Aside from this item of depreciation, which time alone will solve, Mr. Pizey is very optimistic. "When it comes to competing with steam tackle, it costs the farmer four dollars an acre for light plowing against five dollars for tractor work if

he pays promptly and takes the ten per cent discount. The farmer when he uses steam tackle has to supply the coal and water and that will take at least one man as well. It is therefore a certainty that he will pay more for steam tackle work than for tractor work. Also, when it comes to threshing, the charge is twenty-eight dollars a day as compared with twenty dollars for the steam outfit. However,

the farmer has to provide coal, water and additional help, so there is very little difference in the actual cost. The steam tackle is where he gets his most serious competition. When it comes to horse work, it is like taking candy from a child. The cost of horse work is so high that the farmers who study prices at all are only too glad to get the work done by tractor. In fact, many of them are selling some of their horses and depending on us to do their plowing, cultivating, harrowing and rolling. There is no doubt but that they can save money."

I questioned Mr. Pizey as to whether it wouldn't be better for the farmer to own his own tractor so that he could do his work at the right time. He replied, "Well, yes, there is a great argument in that; but if the contractor is big enough he can usually have a tractor ready to go out at a moment's notice. There is also the fact that we have our tractors working steadily whereas a farmer's tractor is idle at least fifty per cent of the time. This means he has an investment of about twenty-four hundred dollars with interest going on all the time. Again, there is the fact that very few farmers can give the tractors the skilled attention we give them. The men operating the tractors are skilled field men and are paid eight dollars a week, with twenty cents per acre for plowing, ten cents for cultivating, and five cents for rolling and harrowing as a bonus. These men operate the tractor and make minor adjustments. However, they are not allowed to touch the carburetor or magneto adjustments. If a tractor breaks down in the field, another is immediately sent out. We find that six tractors in the fields is about our limit with twelve tractors operating. This allows us time to thoroughly overhaul periodically and have a tractor or so in reserve to send out for breakdowns."

Much of the success of the Agri-Culture Contract Company, Mr. Pizey thinks, is due to the American tractor used by them. When they went into the contracting business they had to decide what type of tractor to use. Various types were tried out and finally they decided on the one make. Then they bought as many as they could lay hands on. Some of their tractors have been in constant use for four years and are still doing very good work. Mr. Pizey was so impressed with the possibilities of this tractor that he decided to sell it as well as to use it. With this in mind he went to the States and was granted



Entrance to the Machine Sheds and Yard of an English Farm Power Custom Man.

the sales rights for Great Britain. He has bought and paid for a number of tractors which are lying somewhere in New York, waiting to be shipped. Mr. Pizey is mad and I don't blame him for he has orders on his books, his money paid out, and no tractors. The tractor's home office is not to blame for it shipped the tractors but the long-shoremen in New York—and the railroad—have done much to lose America a lot of business.

I need not dwell upon Mr. Pizey's praise for his tractor. However, he laid especial emphasis on the fine work of its American engine. This points the moral that a tractor is only as good as its engine. One may ruin a finely designed tractor by a bad engine. In passing, I might say that much of the good results of the Crawley Agri-motor, an English make, are due to the fine qualities of an American engine used in it.

Mr. Pizey finds that it pays to run the tractors on gasoline. This is largely because lubricating oil is extremely expensive and kerosene tends to cut and destroy the lubricating qualities of the oil. However, aside from this item, it is quite possible to get satisfactory results on kerosene.

The plows used at present are small American self-lift plows and English steering plows.

Summing up the case of the power farming contractor, I do not think it would pay in America. There is no doubt that these people are making a success but conditions are very much in their favor.

They are operating in a section of England where the farmers are progressive and willing to try tractor work. The country is very highly farmed and the percentage of pasture land very low. The country is rolling but not extremely hilly. However, where hilly, the soil is light and thin. The climatic conditions are favorable, rain being the only detriment to continuous work. It can be readily seen that there are few places in America where these conditions could be duplicated. In America the farmer is lucky if his tractor works a hundred and fifty days a year, whereas these people are figuring on practically continuous operation. The facts are these: An American who took up power farming contracting would find his machinery idle as many days as does the American farmer. Therefore it is absolutely certain that the farmer could not get his work done at the right time without paying a price out of proportion to benefits received; but the system works in England.



A Prize Winner at Salisbury. Most English Farmers Own Sheep.

Harnessing the Sun in the Land of Pyramids

By R. H. MOULTON

IS it possible to harness the sun? Can its tremendous energy be controlled in such a way as to utilize it for practical purposes?

A Philadelphia man, Frank Schuman, says it can; and as proof of his contention he has devised an appliance which concentrates the heat rays of the sun and produces steam, which in turn is used to drive an irrigation pump. He has erected a sun power plant near Cairo, Egypt, where there is nothing cheaper and more plentiful than sunlight, which is capable of pumping six thousand gallons of water a minute.

In explaining the principle on which his sun power plant is operated, Mr. Schuman says that if a flat tin pan be painted dull black on the inside, then packed with cotton around the bottom and sides to prevent loss of heat, and a small quantity of water poured in, covered with a window glass, and exposed to the tropical sun, the water will soon begin to boil and give off steam. The sun shining into this pan produces a temperature of about 250 degrees Fahrenheit, and about four British thermal units of heat a minute per square foot of surface exposed. If, however, another square foot of sunlight can be caught on a mirror and thrown into the black pan, then it will produce eight British thermal units of heat per minute, which, of course, means a much higher temperature. For every additional square foot of sunlight thrown into the pan four additional units of heat are secured. This explains what is meant by "concentrating sunlight."

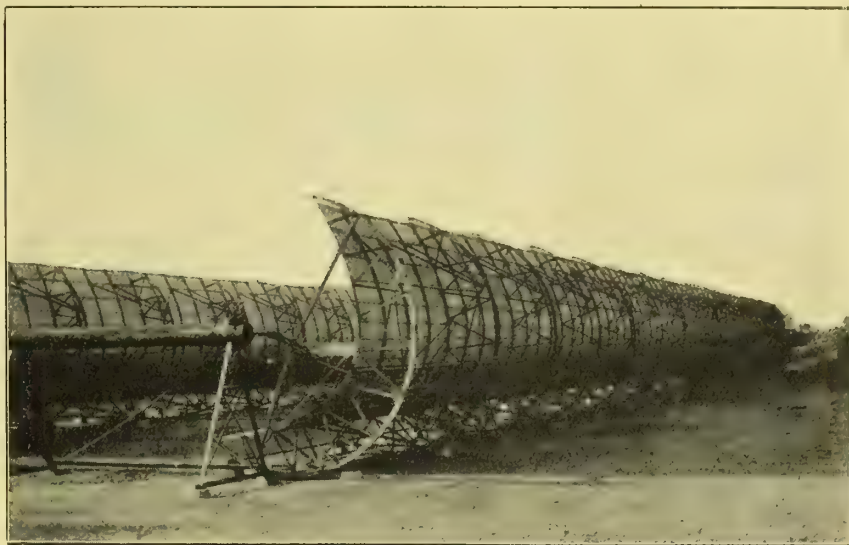
If the tip of an ordinary tin funnel is sawed off, the interior polished, and the funnel turned toward the sun, the sun's rays will be caught and will pour through the hole at the bottom just as water would, and if a small blackened boiler were placed at this opening they would impinge upon this, be absorbed, and turned into heat. This same heat will turn the water in the boiler into steam and this steam would give power. But this method of concentrating sunlight presents practical difficulties which make it too costly. Mr. Schuman, therefore, conceived the idea of using mirrors to perform

this function and the result has proven eminently satisfactory.

At the Cairo plant the steam is generated in sun heat absorbers, five in number, which are each thirteen feet wide at the top and two hundred and four feet long—parabolic troughs for catching the sun's rays and throwing them upon the boilers swung at the focal line. Each mirror is set at such an angle in relation to



The Battery of Sunshine Absorbers.



Set at Proper Angle to Catch Sun's Rays.

that of the earth, and they turn from east to west on their axes to face the sun. The mirrors are set in a light steel framework, each one at the proper angle to throw the light upon the boiler, and consist of ordinary sheets of third quality thin window glass silvered on the back, the silvering being protected by the proper means from the atmosphere.

At the focal line of all the light rays there hangs a cast-iron boiler, which is tubular at the top and

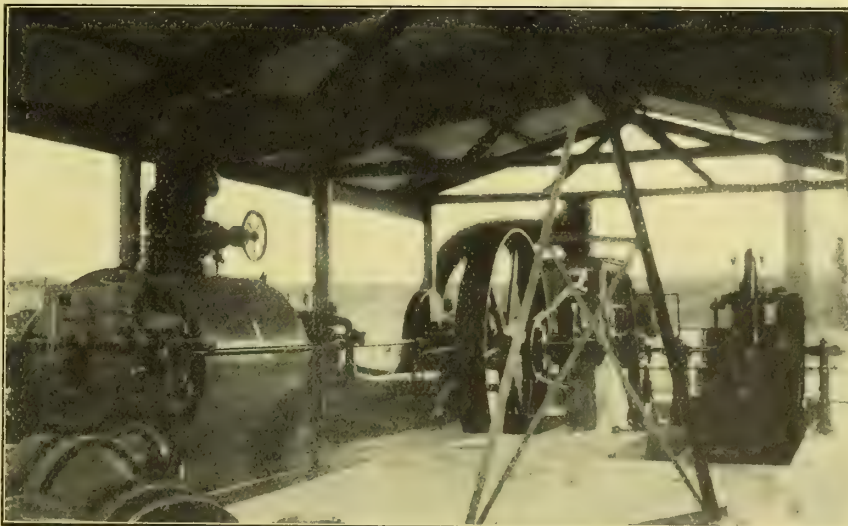
flat at the bottom, where the water space is. This boiler is fifteen inches high and hung on light rods in such a manner that the expansion and contraction will not interfere with it. These heat absorbers are set on crescents, which roll in a system of small racks and pinions for turning the sun heat absorbers from a low eastern aspect in the morning to a low western aspect in the evening.

Of course, when the sun is not shining the source of supply is cut off and there is no way to get it. This trouble is overcome, however, by storing it in an already well-tried and simple manner. During the day large quantities of water are heated to the boiling point and stored in large tanks, properly insulated from the atmosphere. From this boiling water a supply of low pressure steam can be drawn during the night or during a rainy day, and this is quite enough to run the engine, which is so constructed that it will run economically at four pounds absolute.

And as far as we are personally concerned, Uncle Sam can take our excess-profits tax and buy himself a button with it.—*Dallas News*.

The mind of man is subject to many strange delusions, and one of these is that the stock market has a bottom.—*Chicago Tribune*.

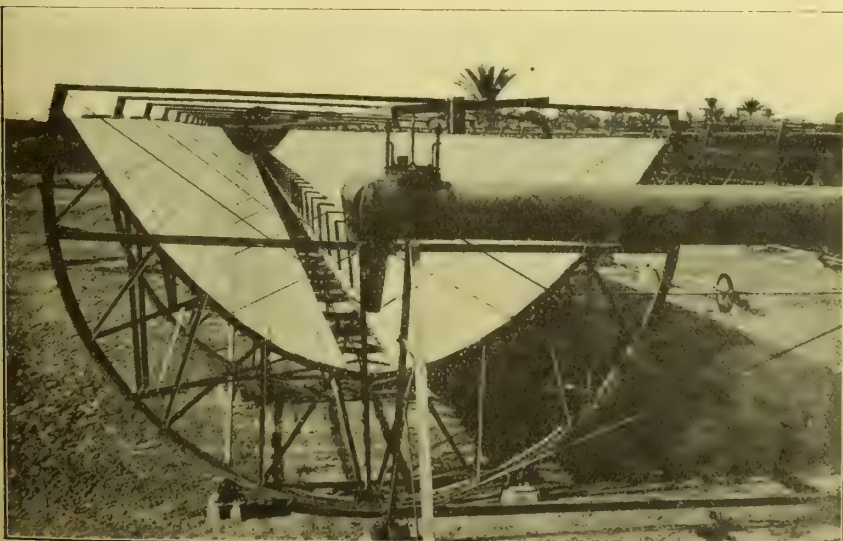
Soviet sympathizers who say Russia has a right to choose her own form of government are not willing to admit that the people of the United States have the same right.—*Boston Shoe and Leather Reporter*.



The Pumping Plant—Engine, Condenser and Auxiliaries.

the sun and the boiler that all of the rays falling on the mirrors are thrown on to the boiler. This boiler, being painted a dull black, absorbs these rays and turns them into heat, which generates low pressure steam.

The heat absorbers are placed about twenty-five feet apart, so that they will not shade each other when the sun is low in the morning and afternoon. Their axes point north and south as does



This Shows a Boiler Suspended in Center.

Pheasants in the Farmyard

By FELIX J. KOCH

THESE are the days of both the farm-yard profitable and the farm-yard beautiful, and if you would add a touch of both these to your place, why not put up a pheasantry on the farm?

Change the place?

Indeed it would not change the place,—not appreciably,—any more than perhaps an additional chicken-yard would go to change the place,—except that it would give to it a touch of distinctiveness,—a flash, a turn, of brilliant exotic beauty that, unless perhaps you had raised the lordly peacock, you have never had before.

Out at the heart of the American Midwest, at Camden, Ohio, for example, one pheasant-grower has proven conclusively that pheasant growing can be made profitable on no more space than the average suburbanite, let alone professional farmer, gives to the chicken runs in his back yard.

Behind the homestead itself a bit of immaculate green lawn stretches between flower beds to the actual "pheasantry," as he calls it. A neat, white-painted, almost cubical building,—a hen house it might very easily be, is set where the garden trees throw their shadows on warmest days, and where white clematis and trumpet-vine may trail over. Off from this building netting "runs" extend far to the rear of the actual garden space, where a small wooden shelter for the birds, when they would stay outdoors in bad days, goes to terminate the whole.

The floor of these runs is gravelled over,—not hard to keep clean; in this pebble then there are set circles of a lush meadow-grass and attractive clumps of barberry-bushes. Over the netting of each run an ivy is trailed. Far from being unsightly, or marring the fancier's garden, the whole is most attractive indeed.

The visitor, however, finds his eye taken, almost on the instant, from the attractive runs to the birds within. An exquisite scarlet pheasant comes tripping up, as if expecting feeding; these birds are raised for their beauty, above all. In the next run some brown pheasants saunter; these birds are hardier and gamier than the first and are raised for the sport they will eventually afford, when released on the buyers' farms.

Holding them for the camera, by feeding a bit of cracked corn and the such like, one has opportunity to view things at close range. Two eggs are laid squarely on the open ground of the run here, at one place; a perfect pile of them is in a far corner of the run. The pheasant is prolific and not captious where it drops its eggs. We recall finding some in the road at a pheasantry at Pleasant Ridge, Ohio, at one time.



The Owner and Some of His Birds.

Mr. C. R. Neff, proprietor of this interesting Camden pheasant-hatchery, tells us that already with the second year of his attempting the venture, and with but twelve birds in all, he has obtained three hundred eggs of the ring-necked pheasant and forty-five of the golden pheasant beside.

Aside from the pleasure to be had in the experiment, it is far from unprofitable. Just for one, arrangement is made with the local game warden to sell him as many eggs as the man may desire to part with himself, at twenty cents each; these then being distributed by the warden among the farmers of the country. Farmers hatch these eggs under Bantam chicks as a rule, though an ordinary Plymouth Rock hen will do. Under the hens, or under the pheasant mother, out of a

setting of eighteen eggs at least fourteen may be expected to hatch. As result, pheasant-hatching is no more bother or cost to the farmer than ordinary chicken-raising would be.

For the first two days after their hatching, the young pheasants are not fed at all. Later a little oatmeal is served them. Then, after three or four days, a cracked feed is used; much like that employed with ordinary chicks, and a pretty sight the wee little fellows make, scampering back and forth for this food.

The pheasants grow rapidly from this point on, and are, almost from the very hatching, quite hardy. In pouring rain, in icy cold, in thickest snow storm, one will find the birds desert the hutch at one end of the run to come out of the house at the other and to seem to take keen delight in strutting round in the open.

Set out against a newly fallen snowbank, the pheasants form a beautiful sight. Just in the pleasure from watching the birds, many a grower would find reward enough, aside from the goodly prices brought by the eggs, and before so very long, the very near exorbitant price to be had for the birds.



The Runs Are Netting Enclosed and Gravelled.

A Modern Pioneer

How a Colorado Man Uses Power

FARMERS who live within four or five miles of a garage and a dealer's supply of extra parts require no particular courage with which to embark on an uncharted farm power venture. This cannot be said of C. L. Henry, Graft, Colorado, who lives sixty-eight miles from a railroad.

When Henry bought his farm power equipment, in July, 1918, he had no salesman stop at his door to arouse his interest. He traveled four hundred and twenty-five miles to make his purchases, without any previous solicitation from dealers.

From careful reading of farm power papers and machine specification sheets, Henry decided he would buy both truck and tractor, then dispose of all horses on his place. Since he would likely have to get his repair parts direct from the factory, he decided to buy the two machines of a company in Iowa, which made both trucks and tractors. As this company's nearest dealer was at Wichita, he went there to make his purchases.

The railroad situation was so bad that Henry decided to save money and delay by taking the truck and tractor overland. He bought a two and one-half ton truck and a 15-30 tractor (which weighed about forty-five hundred pounds), se-

cured a driver for the truck, and started on his four-hundred-mile journey.

The roads from Wichita to Graft are sometimes mere trails across open prairies. Traveling with a slow-speed machine, such as a tractor, Henry was obliged to take the most direct route possible. This meant that bridges were not always at hand when a creek or small river had to be crossed. Three good-sized streams were forded; this was not a difficult thing to do, about the first of August, for the water was very low. Even the Arkansas River can be forded, in western Kansas, although the sandy bottom is often treacherous.

In crossing the Cimarron River, Henry's truck, which was equipped with solid rubber tires, got stuck in the mud. The driver thought they would be there for a long, long time. But Henry secured a good drag chain and then towed the truck across with his tractor.

Graft is about seventy miles south of the Santa Fe railroad. The country is of good elevation, fairly level, almost treeless. Once at his home ranch, Henry had to solve for himself the upkeep and repair problems of his truck and tractor. He

(Continued on page 40.)



Neff's Arrangement for Pheasant Keeping.

Making Minnesota Farms

Track-Layers and Trucks Reclaim Fifteen Thousand Acres

LAST summer the writer stood on the main street of Albert Lea, Minnesota, keeping eyes alert for farm trucks. Looking down a side street, I noticed what appeared to be a farm truck; it was dusty and travel-worn; it bore no advertisement. Two farmers were busily loading the truck with ice. I quickened my step and bore down on the workers.

"Is this truck used for farm work?" I inquired, fearing to hear the answer.

"It sure is," answered the smaller man, straightening his back to answer what sounded like a foolish question. "We live fifteen miles from town."

"Too good to be true," I thought. I produced pencil and notebook, heard something of what they were doing, then dashed to the hotel and got my camera, prepared to make a day of it.



These Trucks Are Used to Bring Drainage Tiles to the Farm.

We rolled swiftly around Fountain Lake, outside the city, and hastened eastward with our cool ton of ice.

These two men are employed by a company which is reclaiming fifteen thousand acres of swamp land. The land in the drainage district had long been regarded as almost worthless; but several men, with faith in the fertility of the land and its availability through the use of farm power, have organized a company which is apparently improving land for the purpose of benefiting itself by crops rather than by the sale of land. The president of the company, I was told, lives on the land. He gives the details of farm management and improvement his constant attention.

Without power machinery, this reclamation job would have been impossible. Before going into a survey of the machines used, let us get back to the ice. It might melt.

Arriving at the farm, my two friends backed the truck to the rear of the store-house which supplies the

various camps. Here a small house had been built for a refrigerator.

A door, about two feet square, had been cut on the south side of the building. As my friends pointed out, the ice house itself should be on the north side of the farm-house, with its door facing north.

This door, about eight feet above the ground, was wide enough to allow a chute to be dropped from it to the body of the truck. By means of a rope and pulley, the truck-load of ice was quickly packed in the attic of the refrigerator.

With modifications, this system of refrigerating could be used on almost any farm, especially if the farm possesses a truck. Speed in transport surely means a considerable saving of ice.

While this ice house is about eight by ten feet in size, with six thicknesses of wall, a smaller house, with

some packing between two walls, could be built for about half the cost. The window need not be eight feet from the ground; a lower window would save labor.

Once the ice had been stored away, the big truck set out for Clark's Grove, a station four miles away, to fetch a load of drainage tiles. The truck left at 11 A. M. and returned at

noon with three thousand pounds of tiles.

In the meantime, I had climbed aboard a small truck, which was carrying supplies to the various camps or sections of this big farm.

The Albert Lea Farms are run on a specialty basis; there is a camp for each particular phase of farming and reclamation work. I shall list the camps.

1. Construction (new buildings, fences and repairs).

2. Road grading (all roads off the main highway must be made).

3. Tiling (when I was on the farm, \$1,000 worth of tile was being laid every day).

4. Hay and gardening (the farm not only raises acres of fine garden truck but is experimenting all the time with vegetables not generally raised in this section).

5. Ditching (a real shack is mounted on the big 200-horse power ditcher where

the men eat and sleep. It is a dormitory on wheels).

6. Tractor camp (ten large tractors are used, nine of them being track-laying tractors).

7. General farming (two big separators are kept here, which do "custom business" for the other camps).

8. Hauling (both trucks and horses, with a blacksmith shop for repairs and shoeing).

In addition to these camps, the general store and the superintendent's office have separate quarters. They are placed near the

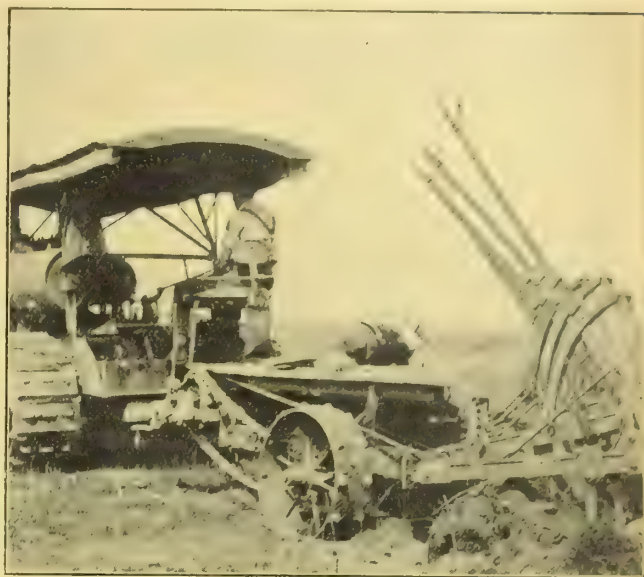
row of pretty bungalows, facing Lake Geneva, where the farm manager, engineer and surveyor live.

By this time you have some idea of the magnitude of this farm's interests. A community life has been developed on what was once a stagnant swamp.

When the company began operations, the urgent need was for drainage and roads. The big ditcher was able to give both.

The drainage ditch system was laid out with the road requirements always in mind. As soon as enough ditching had been done to enable the surface water to drain off, the ditches were dug parallel—fifty feet apart where the main roads, presumably sectionlines, were located, twenty-five feet apart on side roads. The earth was thrown inward between these ditches, creating a fill for the intended roads.

After several days' drying, these fills were ready for the tractors and road graders. Having a rough-crowned dirt road already, the graders soon got these roads in surprisingly good shape.



Two Men with a Track-Laying Tractor Can Keep Six Plows Working in the Former Marsh.

In delivering supplies (including ice) by truck to the various camps we traveled over wide, smooth roads that had been the site, two weeks before, of a slimy marsh. While these roads were, of course, soft, as are all new roads, the short space of time required to give them the appearance of traveled roads seemed incredible.

The ditcher makes eight-foot ditches as a rule. The main ditches are banked and left open; the tiling gang is busily laying lines and digging trenches to furnish the sub-drainage into the main ditches.

After the ditcher has driven away the water and prepared the way, the tractor camp moves on to the new ground.

As our truck bumped over ruts and ditches from the road to the spot where the cook-wagon and bunk-car of the tractor camp had been parked, the writer could imagine he was on the Bruneau desert in Idaho, or on the old machine-gun range at Camp Funston, Kansas. Except for the heaviness of the soil, there was little

(Continued on page 40.)



These Two Farmers Built a Big Refrigerator and Now They Haul Ice Fifteen Miles by Truck.

Circular Corncrib of Tile

BY ORIN CROOKER

DURING the summer of 1920 the writer examined at least twelve circular corneribs built of tile and located at widely separated points in Illinois and Iowa. He is of the opinion that this type of crib possesses so many advantages that increasing numbers of them will be built. They are enduring, fire-proof and rat-proof. Corn cures well in them. The initial cost represents about the only outlay. There is no up-keep to be considered, save possibly in the way of re-shingling in case this type of roof is used.

One thing about these cribs, which impressed the writer strongly, was that no two of them were alike. Each appeared to be the result of "an idea" that had been elaborated by the builder. In one or two instances, features prominent in certain of the cribs inspected had been incorporated in others, a fact which illustrates how in these days of automobiles and wide travel an "idea" may jump a hundred miles or so and re-establish itself almost overnight. Because there seems to be no standard design for such cribs, it has been thought to be of interest to point out in this article some of the variations observed, bearing in mind always that these have been incorporated to meet individual needs. None of them alters the fact that this type of crib provides storage for corn under conditions that are practically ideal in every way.

1. Arrangement of cribs, size, capacity, etc.

The cribs inspected were about evenly divided between straight corncribs and cribs combined with granaries. In the latter instance the granary invariably was overhead, but in one case it extended only part way around the structure, the balance of the space being used as a continuation of the corn storage below. In capacity, when used for corn alone, these cribs were found to hold as a rule from five thousand to six thousand bushels. Where a granary occupied part of the space, the "split" was about three thousand bushels of corn and two thousand bushels of grain, such as oats. The largest crib we saw had a capacity of sixty-five hundred bushels of corn and three thousand bushels of oats. If used exclusively for corn, the granary being filled with shelled corn, it would house eight thousand bushels. This was the only crib of this size, how-

ever, that we found. All of the cribs were built, of course, around a central shaft, or core, which we found to vary from six to ten feet in diameter. The cribs proper were never less than nine feet in width and in one or two instances measured ten feet. The wall measurements to the eaves were

not far in any instance from twenty-eight feet.

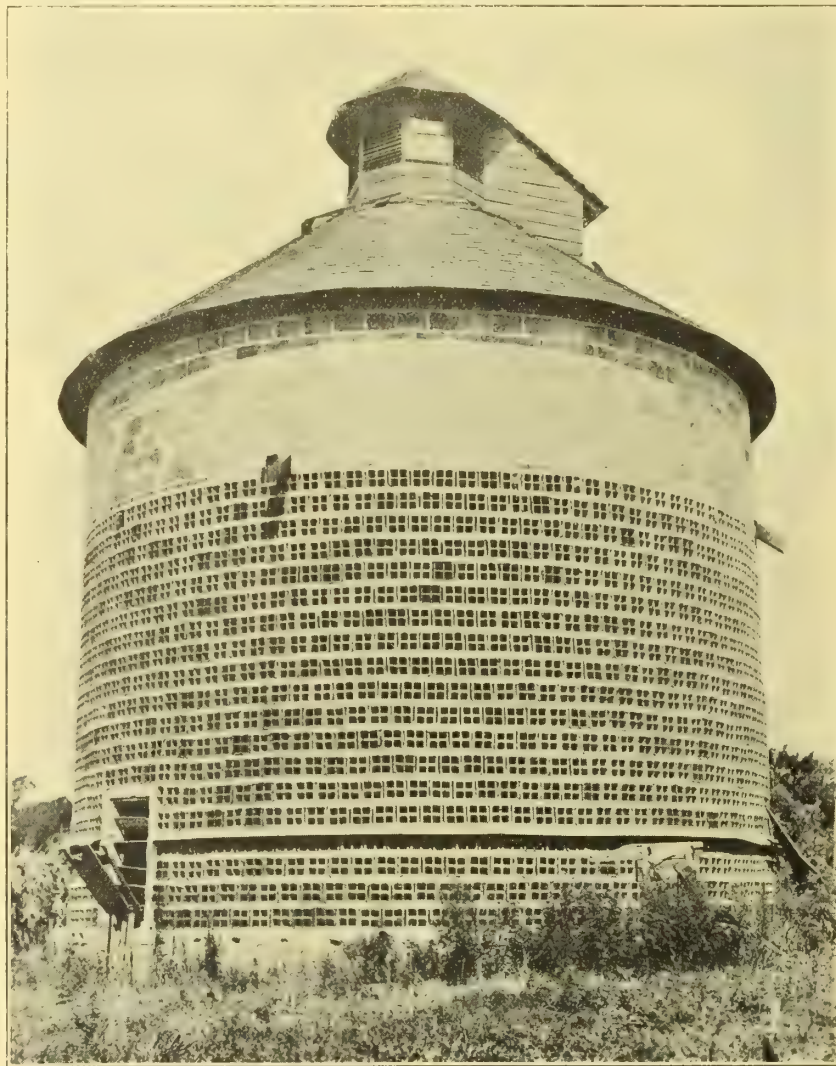
2. Foundations and floorings.

In one or two instances the crib was built upon a solid concrete base elevated but a few inches above the ground. In most cases, however, and particularly where machinery for filling and emptying was permanently installed, the foundations were carried up from eighteen to twenty-four inches above ground—trenches for withdrawing the corn being built underneath the flooring. For the most part, the flooring was found to be of concrete with a slight pitch toward the outside to shed water that might find its way inside. In one case, heavy plank were used. In such instances where the crib did not sit close to the ground the foundation consisted of a solid ring of concrete. We did not examine the foundations minutely in every case but it was stated to us by one owner that the ring of concrete was twelve inches wide at the top and three feet at the base, part of this, of course, being under ground.

3. Walls and wall openings.

The tile used in that part of the structure devoted to corn storage was of cellular design. We noted two forms of this tile, one with nine cells, the other with four. The larger tile was constructed so that the cells lay horizontal in the completed structure. In the smaller tile the cells were given a slant downward and outward so that rain drains out almost as fast as it beats in. For that part of the walls housing grain, ordinary silo tile were used. In one instance that came to our attention imperfect silo tile had been used at quite a saving, we were told, in expense. As for wall openings, some of the cribs seen were built without any openings of this sort whatever. In these cribs the corn and grain were handled exclusively by permanently installed machinery. Where such machinery was not installed, it seemed to be the usual plan to provide grain spouts at the base of the granary bin, several of

(Continued on page 40.)



This Crib Holds Three Thousand Bushels of Corn.

Letting Gas Do the Work

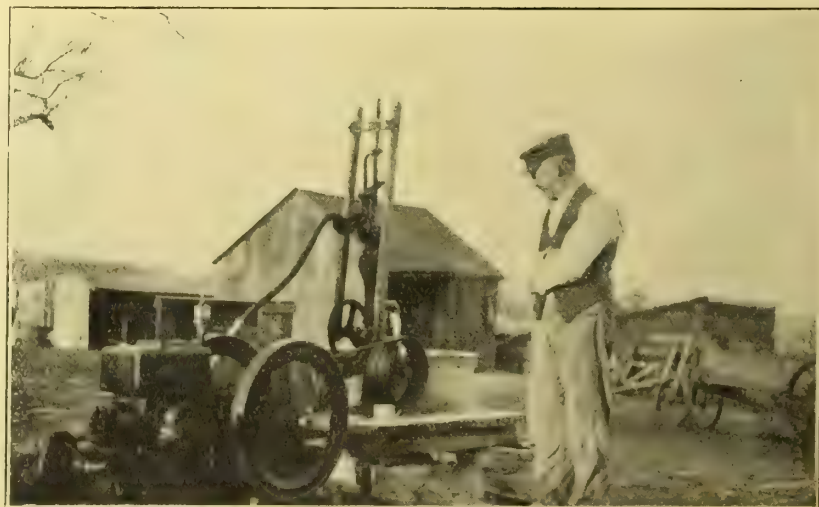
BY F. L. CLARK

THE picture was taken unawares of Herman Haltemeyer, a farmer living near McGregor, Iowa. Note the smile and the folded arms and the absorbed gaze of Mr. Haltemeyer. There's a reason for all three. For twenty-five years Mr. Haltemeyer has been farming the same farm in the McGregor vicinity. He has had a good many cattle and hogs and Mrs. Haltemeyer has had many chickens in the twenty-five years. They had to be watered several times a day, three hundred sixty-five days in the year. The Haltemeyers have never had a windmill. All the water for all the stock, not to mention household uses, has been pumped by hand. This has meant considerable pumping each day. When you multiply the average number of pump strokes per day by three hundred and sixty-five and three hundred sixty-five by

twenty-five years, it counts up pretty fast, indeed it indicates that an appreciable part of Mr. Haltemeyer's life has been devoted to the drudgery of pumping.

The other day he decided to let

gas do the pumping henceforth. The gas engine was bought, set up, the pump handle began to work, and the water to flow in a steady stream. Well, the picture tells the rest of the story.

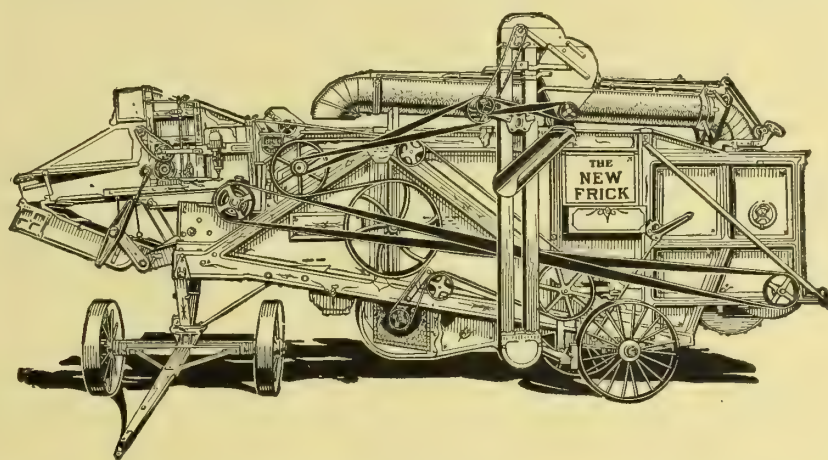
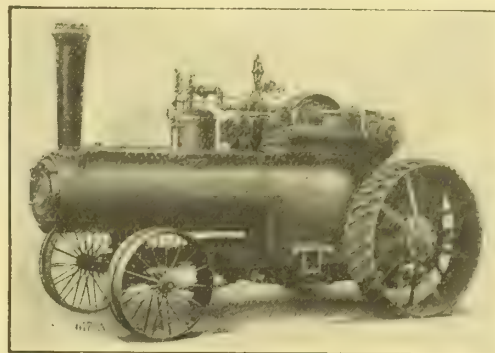


Herman Haltemeyer Likes Its Looks.



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New 1921 Cut Prices on Canvas Endless Thresher Belts

32 OUNCE DUCK, GUARANTEED

FOUR PLY BELTS IN THE FOLLOWING SIZES:—

75 ft. 6 in.	\$32.00	75 ft. 7 in.	\$37.00	50 ft. 8 in.	\$28.00
100 ft. 6 in.	42.00	100 ft. 7 in.	48.00	75 ft. 8 in.	41.00
125 ft. 6 in.	53.00	125 ft. 7 in.	60.00	125 ft. 8 in.	67.00
		150 ft. 7 in.	71.00	150 ft. 8 in.	82.00
				150 ft. 9 in.	89.00

FIVE PLY BELTS IN THE FOLLOWING SIZES:—

125 ft. 7 in.	\$75.00	125 ft. 8 in.	\$ 84.00	150 ft. 9 in.	\$110.00
150 ft. 7 in.	89.00	150 ft. 8 in.	100.00		

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That you get more genuine satisfaction at less cost when you use this class of tobacco.

A small chew lasts so much longer than a big chew of the

ordinary kind. And the full, rich real tobacco taste gives a long lasting chewing satisfaction.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco

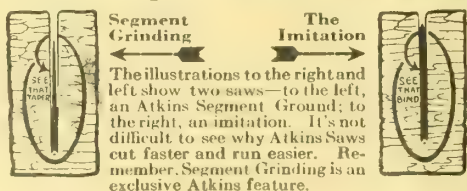
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Silver Steel, our exclusive formula; Segment Grinding, our exclusive patent; expert workmanship; and our patented processes, make the name ATKINS mean SAW VALUE

The farmer wants the saw that runs the fastest and cuts the easiest, that's why there are so many Atkins Silver Steel Saws on the farm today. Another reason is because Atkins Saws are Segment Ground, see explanation below.



E. C. Atkins & Company, Inc.
"The Silver Steel Saw People" Established 1857

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Minneapolis	San Francisco	Paris, France

Aunt Malinda

I SEE they've reefed their sails on the great inauguration spread that was to take the wind out of all previous attempts on the fourth of March. When they first began talkin' about this big doin's, I sorter favored anythin' reasonable that 'd be in keepin' with the majority the country had given President-elect Hardin', just to let the world know that because one President had blown in a few millions in bein' convoyed across the seas with the impressiveness of an Antony or a Cleopatra, we hadn't run out of material for a little more red fire. But on more mature deliberation I'm glad that the new President's goin' to shut off the flow.

This is a democratic country. No, it's no such a thing! It was a democratic country for eight years, but durin' that time the democratic notions became autoeratic and bureaucratic and sometimes popoeratic, and this turned the country upside down and 'shook the gates until the little old democratic donkey was buried under an avalanche of disapproval, and now it's a republican country; at least it'll be republican long enough to allow Warren G. Hardin' to show his hand, and if he makes good it 'll remain republican until somebody else upsets the apple cart. But while it's overwhelmingly republican, still it's supposed to be a democratic country in its ways and, as such, we might as well settle down to business without tryin' to put on too many free nigger airs. So I'm glad that Senator Hardin' called the splurge off. That trip to Europe on a man-of-war, escorted by all the other ships and dignitaries, was enough to last the American people for the next fifty years, and by that time maybe we'll be crazy enough to want another change and be kept out of war and out of peace and out of a great many other things includin' untold millions of extravagant waste. This is February, and long before the fourth of March has rolled around the groundhog will have either seen his shadow or missed the opportunity, as the case may be. It's been a very mild winter so far, but there 're lots of political frost bites due in a few days and there'll be weepin' and mournin' and lots of political pigs squealin' because the troughs 've been upset, and the swill 'll be missin'.

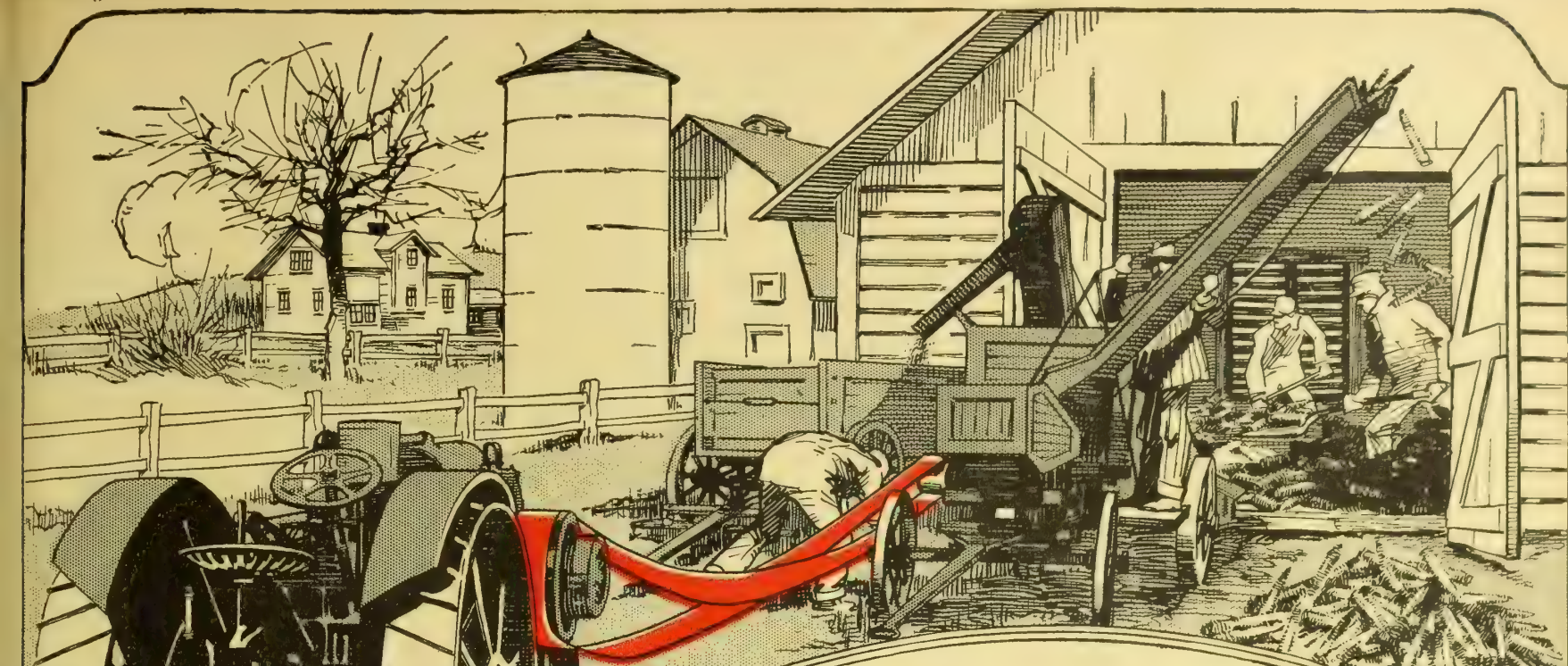
'Way back in the seventies the democrats used to sing "Put your Belknap sugar in your Babcock whiskey, for you are gone." This was when the republicans had a gang of grand rascals who tried to take the shutters off of the government's warehouses, and they needed a cleanin' up. Now there'll be several other "mussell shoals" to run through the wringer on wash day, so we might as well begin the new administration in a modest way and get the scrub broom brigade started down Pennsylvania Avenue instead of a royal cavalcade of political horsemen and footmen who are to take over the reins of government. Let's put off this fuss and feathers for four years and if at the end of that time we've made a record worthy of public praise, why then it will be time to scatter the sawdust and let the whole herd of republican elephants prance all over Washington.

Woodrow Wilson rode a bicycle eight years ago, but he used battleships and palatial trains before the end of his reign and seemed to forget the name of the factory that made the wheel on which he used to roll by the hall of Congress with that schoolmaster slogan, "Get busy, boys!" We grow in grace and gradually allow Uncle Sam to meet the bills as the cuticle thickens on towards the close, and there ain't no use in encouragin' this extravagance right in the grand introductory overture.

I notice that Mrs. Hardin' has been in New York buyin' her White House trousseau and gettin' ready for the big doin's, but I hope she'll omit the picture hats for these take up too much space and require too big a bandbox to carry 'em around in. I heard a woman who came back from London while President and Mrs. Wilson were there fixin' up the "Fourteen Points," claim that those big hats was the reason that a battleship was required to make the trip. I never really took that seriously although I heard it explained that those turrets had to be used for bandboxes. How folks do exaggerate things! And now they say that the President-elect has to pay back eighteen thousand dollars of his salary in income tax while President Wilson was exempt from this law because it was enacted after he was elected.

Of course I'm not supposed to talks politics here, or wasn't supposed to talk it, but since we women 've been recognized as voters and office holders and some 've become Congress-women, others judges of courts, and still others police-women, I guess it won't hurt anybody's feelin's if I merely tell the truth about both sides.

We've all run riot with ourselves, "lickety-split, hellity-scoot, get-out of the way for old Dan Tucker," for so long that it's time for us to settle down to common sense and, like December 31 for swearin' off, March 4 will be a good time to begin fumigatin' and gettin' back to earth once more at the fountain head of affairs, and I'm glad that we're not goin' to start off with a blare of trumpets or a herd of elephants prancin' up to the White House when Warren G. begins steerin' the ship of state.



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THE strength and endurance of Stitched Canvas Belting makes continuous tractor use practical. It's the belt for *every* heavy job. It's made for all-the-year service, and the Sawyer Stitched Canvas Belt is the recognized leader in the farm power field.

Its constant dependability has made the *Sawyer Belt* the choice of experienced threshermen for 30 years. Rough weather, cold, heat, and steady use cannot affect its vitality.

Put on a Sawyer Belt and keep your engine or tractor busy this winter. There's plenty of corn-shelling, stone-crushing, sawing, pumping, etc., to be done before threshing time comes 'round again.

Get the genuine *Sawyer Stitched Canvas Belt* stamped with the "U. S." seal. Good dealers carry a supply of "U. S." rubber belting, packing and hose connections, in addition to Sawyer Belts and *Sabeco Belt Dressing*.

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The American Thresherman and Farm Power

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FRANK M. CLARKE, Associate Editor

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A PAGE WITH THE EDITOR

THE interest shown by threshermen in their own protection was never more manifest than this year. They are threatened in many states with adverse legislation which would prove their undoing if allowed to become a law, and gradually they are awakening to the danger which confronts them. In the meantime, we are working with might and main to see that no injustice is done this great body of toilers, but what is needed most in this crisis is to keep everybody posted and if they do not read they cannot be informed. Any thresherman who is not willing to support the only publication that's fighting his battles doesn't deserve much sympathy if he gets caught with his breeches off.

IN selecting officers to manage the organizations, and especially state Brotherhoods, care should always be taken to pick out men with executive ability, for this is a full man's size job. The officers should always remember to speak in a voice that will reach the furthestmost part of the hall for we can't all occupy the front seats, and the man in the rear of the building has proven his desire to be informed of all that is going on else he wouldn't be there. This annoying fact is observed at almost every thresherman's convention, in fact, it is the trouble usually found in all public meetings. Don't neglect this important point, for it means much to everyone and members in the rear of the hall are often greatly disappointed in not being able to hear all that is going on.

WE are grateful to our great army of readers for the interest shown on so many occasions and we hope to continue to merit your loyalty. There is one thing which threshermen and their families especially can do, which is almost of untold value, and that is to assist us in obtaining new subscribers. The editor received two letters the other day in one mail telling him how much these subscribers enjoyed this magazine and each informed the editor that he had loaned his magazine to other threshermen, who professed to enjoy its contents from cover to cover, and had spoken in advance for the loan of future issues. Loaning your magazine to a neighbor is a mighty good thing if it

carries with it an urgent request for him to do as you have done, subscribe for it. The editor can't live very long on the benefits received from the loaning of your magazines, thus depriving him of the little revenue he might otherwise receive. Sorter think this over, Ezra.

THE fifteenth of March is almost here,—but not past. There is still time to figure a little machinery depreciation on that income tax return.

WITH Mr. Harding soon in the saddle, we're wondering if the Senate will still prove to be an "outlaw" horse. The farmers want to know.

A stitch in time saves nine, they say. It is often true of belts and wrenches. Have you saved your share for the summer of 1921?

DON'T forget that March is the month when factory owners like to move the clocks ahead one hour. If you have an opinion, Brother, speak up. You're among friends.

BEAR in mind that the first week in March is designated as Repair Week for the entire Middle West. By looking 'round a bit, Ezra, you'll find there's quite a lot of things that can stand repairing. Let's celebrate.

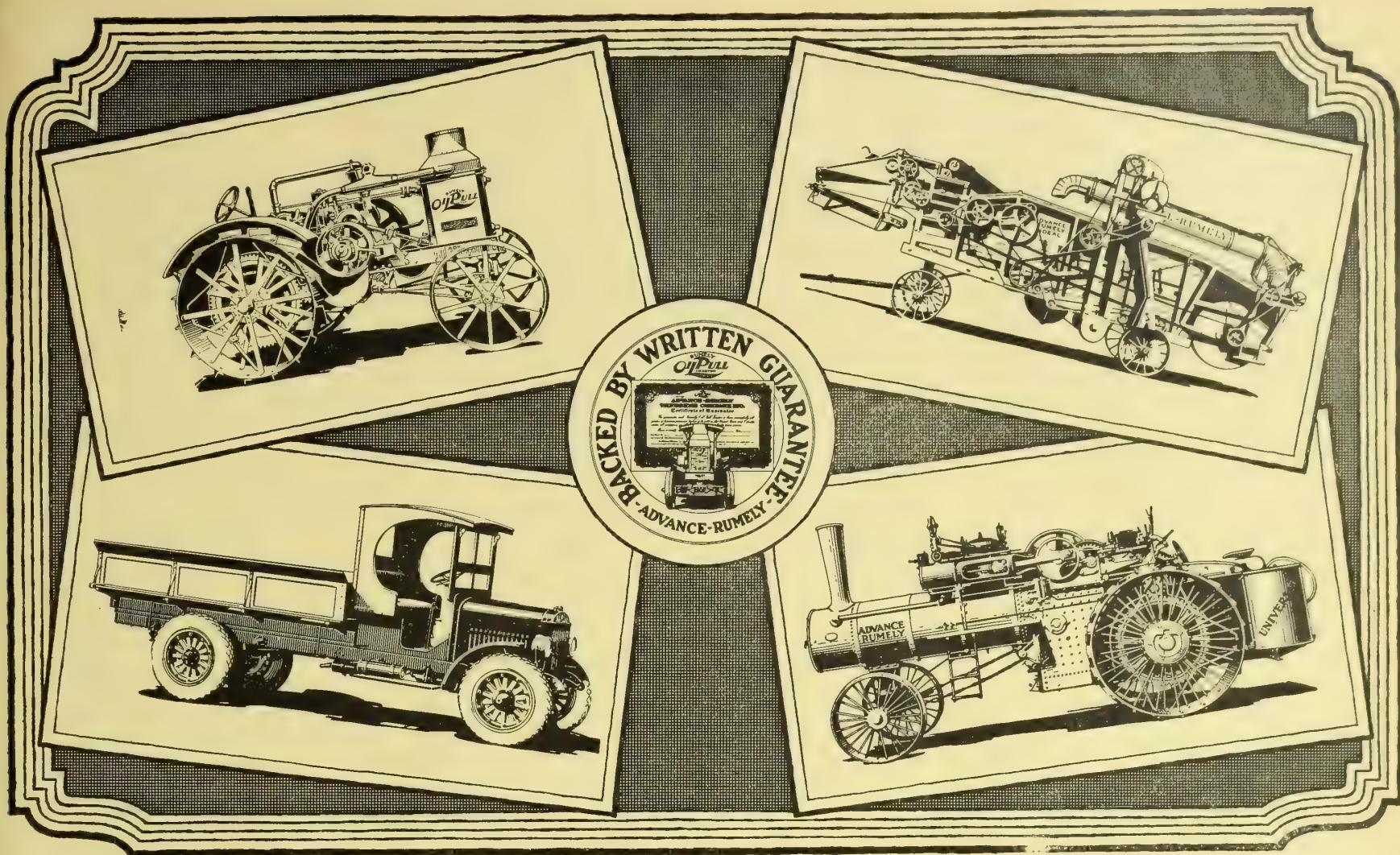
IT has been a source of comfort and encouragement to the editor in making the grand rounds of conventions, to receive the assurances, from the boys just out of their teens to the gray haired sages of three score and ten years whose fifty years of service in the threshing field leaves them still young in many ways, that they all appreciate the work of the last quarter of a century in helping build up their business from chaos to respectability and profit. In Ohio, where the editor for the first time greeted the brethren in person, the assurances of fidelity and appreciation deeply touched his heart. The Brotherhoods of the old Buckeye state, when they have adopted this magazine as the official organ, as they will doubtless do in 1922,

will have taken another advanced step for their own protection. In union there is strength. This has been pointedly proven in those states which include a year's subscription with every membership in the Brotherhood, and Ohio threshermen owe it to themselves as a matter of self protection to see that this little mark is added to their other proofs of appreciation.

THE editor acknowledges with profound gratitude the beautiful gold jewel presented him by the Indiana Brotherhood of Threshermen at its recent convention. Fifty-seven years before, in the city of Indianapolis, the dirty little refugee boy from the south first received a friendly greeting from the Yankees. He helped drive a drove of hogs within a few blocks of Tomlinson's Hall, where the convention was held. Dear old Hoosier state, which gave to the orphan the first encouragement in the business world, and its five thousand loyal threshermen who have stood by him in the dark days of trouble, including the men who have done so much for thresher organization, God bless you!

ELSEWHERE in this issue is an article from a thresherman's hired man, giving his experience from the time he first began his services in the above capacity. This is the first time that this side of the question has been given and we are sure that other articles of like nature will follow from time to time. There is an old Scotch quotation, "O wad the power the giftie gie us to see oursels as ithers see us," that might well apply to the owners and operators of threshing machinery.

So many threshermen are so busy thinking about their own troubles, and how to make the grade, that they perhaps do not give proper consideration to the young man or the water boy who is just beginning his career as a thresherman. It's quite a distance from pitching straw and cutting bands, as in the days of old, to owning and operating an up-to-date threshing machine, and it would pay well to consider the boys who are just beginning this hard and toilsome task. After reading the experience of the brother herein, possibly others may desire to be heard in a like way.



Cutting Farm Costs

One of the most vitally important features of farm work for 1921 is decreasing the cost of production.

In order to secure good profits at the prices now paid for farm products, production costs must be lowered. One of the most satisfactory methods of lowering production costs in any industry is the introduction of labor-saving machinery.

Rumely farming machinery on your farm in 1921 will enable you not merely to produce as much at a lower cost, but to produce more at a lower cost, thus increasing your profits in two ways.

A Rumely OilPull tractor, for example, on any man's farm is an assurance that his every job is done with the greatest possible economy. Economy not only in the fewer number of horses and hired help, but economy in fuel, repairs and upkeep. This, in part, is due to its great strength of design which gives it long life and freedom from repairs—its marvelous kerosene-burning motor with patented Secor-Higgins carburetor which has given it its ability to hold all world tractor fuel economy records during the last nine years.

The Rumely Ideal thresher, too, is a rare example of the feature of economy that can be built into heavy farm machinery. It saves *all* the grain. It saves the custom thresherman's and the farmer's

time because its design overcomes the common faults of clogging, winding and bunching which cause delay in the busy threshing season. The straw goes through in a steady, even flow. Lifting fingers, instead of ordinary shakers, tear the straw open, rake it and beat it from beneath, separating every kernel.

And nowhere is Rumely economy better proved than in the Rumely Universal steamer. No steamer will be found which is more economical in the consumption of fuel and water, or has greater steaming capacity. For a great stretch of years it has been recognized the world over as the standard steamer.

In the ton-and-a-half Rumely truck you get the same full measure of economy, freedom from repairs and long life that has marked every piece of Rumely power farming machinery for the last 80 years. The Rumely truck cuts your cost of farm transportation, it brings grain and live stock markets nearer, and makes better markets available.

Talk with your Advance-Rumely dealer before you buy your tractor, thresher, steamer or truck. He will tell you of the many models—4 tractor sizes, 5 thresher sizes, 3 steamer sizes and the one correct truck size. We'll be glad to send you literature direct upon your request.

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Organization Notes

WISCONSIN threshermen will gather in Madison on February 22 to hold one of their rousing, old-time conventions. The fact that the legislature is in session has both advantages and disadvantages. While it is worth while for the threshermen to be in a position to see their senators and assemblymen at work, the halls of the Capitol will not be available for the meetings. This means that L. A. Clarke, secretary, will have to rent Turner Hall for convention purposes. The expense is considerable, but the Madison branch house managers are showing a fine spirit in helping him to meet this expense.

Senator George Staudenmeyer, president of the Wisconsin Brotherhood, is doing a fine work in watching the threshermen's interests. Organizations would have slight cause for worry if in every state senate they had a representative as able and conscientious as Brother Staudenmeyer.

The committee on resolutions of the Minnesota Brotherhood has published the committee report in pamphlet form. The resolutions and recommendations are clear and readable, and they focus attention on undesirable laws and intended legislation.

It is to be hoped that every legislator now at St. Paul gets a copy of this report. Personal letters go far toward getting results, and the Minnesota brothers can help this committee by emphasizing the report. Those signing the report are: F. D. Morrill, P. J. Penkoski, C. H. Mackenzie.

The Ontario, Canada, Brotherhood has issued a program that is all the name implies. It has a neat cover and just sufficient advertising to furnish a body for the booklet. There is no double-page that does not furnish some reading content.

1921 Brotherhood Convention Dates

State	Place and Date	Officer
Bi-State	Toledo, February 3, 4, 5	W. O. Kiracofe, Pres.
Nebraska	Lincoln, February 8, 9, 10	E. M. Samson, Sec'y.
Kansas Threshers	Topeka, February 11, 12	Tim Payne, Sec'y.
Michigan	Lansing, February 15, 16, 17	B. A. Dickey, Sec'y.
Wisconsin	Madison, February 22, 23, 24	L. A. Clarke, Sec'y.
Illinois	Peoria, March 1, 2, 3	J. M. Boyer, Sec'y.
Iowa	Des Moines, March 8, 9, 10	A. W. Lembke, Sec'y.
South Dakota	Sioux Falls, March 15, 16, 17	W. A. Swark, Sec'y.
Kansas	Salina, March 22, 23, 24	O. E. Snyder, Sec'y.
Missouri	Moberly, March 29, 30, 31	Albert Smith, Sec'y.
New Jersey	Trenton, April 4, 5	S. C. Coder, Sec'y.
Delaware	Dover, April 6, 7	Walter Geist, Sec'y.
Maryland	Frederick, April 8, 9	William H. Renn, Sec'y.

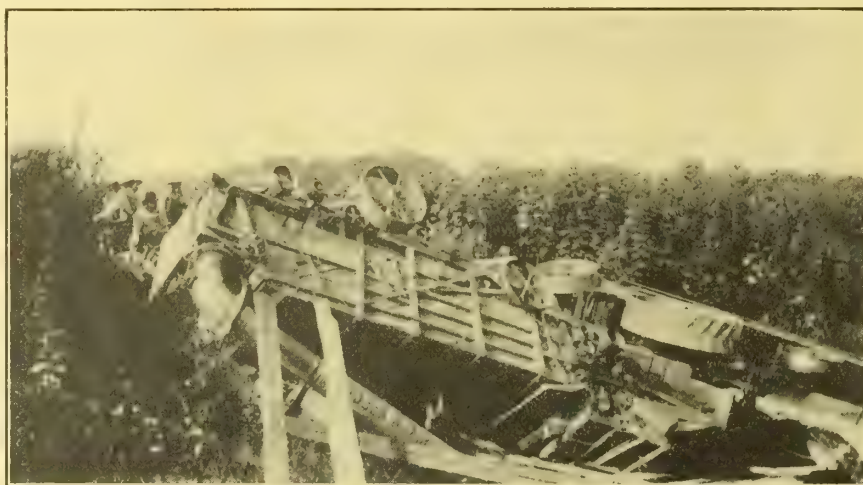
While not so remunerative in a financial way, this sort of program is a real aid to the man attending the convention, for he has no trouble in finding the information he wants.

The thoughtful thresherman will be interested in reading this letter:

"Here is a view of one of the worst bridge wrecks that ever happened in Greene County. It occurred two miles north of Switz City on an iron

west butment and the rear wheels of my machine hanging on the east one. So you see I had a very narrow escape, as I went down in the water with the whole mass of the wreck.

"I thought the bridge was safe, but when I was within eight feet of the west butment, the beams turned and we all went to the bottom of the ditch. After the wreck quit falling, I crawled out without a bump or a scratch, and only about



The Man Who Was in This Wreck Is a Firm Believer in Organization.

bridge across Lattis Creek, just west of where a similar wreck had happened. This bridge was twenty-two feet long, twelve feet above the water, with water two feet deep. It had concrete butments and steel beams that reached the full length of the bridge.

"I had crossed it several times before with the same load but this time it went down and left the engine with the front wheels hanging on the

half wet. It did not hurt the machine very much, for it came down last. The cab was broken, all of the engine, and the governors, but we dug her out and two days later I was on the road again with the outfit. The county commissioners want me to fix the bridge. There is no bridge law in Indiana that I can find to recover damage for me.

"I have belonged to the Indiana Brotherhood of Threshermen ever

since it was organized and feel it is time for us to get a bridge law; for as long as there is no law, there are no bridges, and we don't want this condition any longer."

CHARLES WHITE.

Switz City, Ind.

The success of H. F. Borneman and W. A. Swark in South Dakota can be duplicated in North Dakota. Mr. Borneman visited Uncle Silas and the editorial toilers of The American Thresherman and Farm Power on January 7, and his anecdotes of the early struggles of the South Dakota organization were extremely interesting. It takes several good leaders, with the good will of the rank and file, to assure success in organization work; but everyone must help.

Take time to study the wreck picture which has been sent by Brother Charley White, Switz City, Indiana. His letter throws added light on this affair.

The North Dakota Brotherhood is a going concern. Brothers Newsum, Borneman and Parker, who journeyed to Fargo on January 3 to tell the northern threshermen of the advantages of organization, returned with glowing accounts of the new association.

H. T. Monson, Mayville, who has been a pioneer in his state's organization work was elected president; John A. Berger, Lake Park, was elected vice president; E. R. Bradley, Fargo, was elected secretary. The executive committee is composed of A. J. O'Laughlin, Moorhead, Ed. Eilingson, Reynolds, and D. C. Dagman, Enderlin.

Those attending the convention spoke with the highest praise of Mr. Bradley. Men experienced in organization work realize what a responsibility rests on the secretary. He is the man who must keep interest at a



No Wonder Indianapolis Stopped to Look and Listen.

working point; and Mr. Bradley seems to fill the bill. It was reported that he said he would, if necessary, devote half his time to the work until membership enrollment is well under way. As a business man with a stenographer, his time will be sure to bring results.

The Wisconsin Brotherhood took a big step in the right direction when it mailed a thresherman's report book to each member. These books were mailed on January 7 and will enable every member to furnish the secretary with some valuable figures to present to the legislative committees. One report showed that an Outagamie County thresherman had threshed for ninety-eight customers in fifty-six days. He threshed over seventy-three thousand bushels of oats alone. Such a man is a power in his community. Multiply his case by several hundred and you have a body of men which no legislature can ignore.

The men who attended the Indiana convention report that Brother McCreery, in his Wild West outfit, recalls vividly the days of Custer and Buffalo Bill; and his costume didn't interfere with his cordiality as a host or his ability as an entertainer. That vaudeville program would have made Hammerstein envious!

R. J. Morrison, a Minneapolis man who for many years has made a success of threshing in Saskatchewan, Canada, prepared some fine figures for use at the Minnesota convention. It is to be regretted that amid the general excitement of convention duties, these figures failed to get the attention they deserved. Mr. Morrison had itemized cost figures for the past eight seasons, and they furnished the best proof in the world that threshermen have not raised their prices, in recent years, as much as any other business which affects farming.

The National Conference on Highway Traffic Regulations was held in Washington on January 10, 11 and 12. The writer was present at this Conference as well as other members of our association. John Rynerson, General Counsel, J. A. Rose, Director, of the National Association of Brotherhoods of Threshermen, and C. E. Moore, General Counsel, repre-



How the Brothers Looked at Columbus.

sending the National Implement and Vehicle Association, were with me.

S. J. Williams is Secretary of the 1921 National Conference on Highway Traffic Regulations. His address is 168 North Michigan Avenue, Chicago, Illinois. This is also the address of the National Safety Council, of which Mr. Williams is an officer.

The Conference in Washington adopted the principles of Uniform State Vehicle Act. We understand that further work will be put on this proposed Act during the year.—Ezra Frick, chairman, Committee on Highway Laws, Tractor and Thresher Department, National Implement and Vehicle Association.

J. A. Rose, Pennsylvania, will represent the threshermen at Washington, D. C., when the sponsors for the proposed Uniform Vehicle Law hold their next meeting. W. H. Newsom is giving this matter the closest attention, and if this law slips through any state legislature he will not be the man to blame.

Through the courtesy of Senator George Staudenmeyer, this column is being supplied, with the daily Journals of the Wisconsin senate and assembly. Any man who is privileged to see Mr. Staudenmeyer at his desk in the Capitol realizes what an advantage it is for the threshing fraternity to have a true friend at Wisconsin's seat of government.

H. T. Gens, the new secretary-treasurer of the Minnesota Brotherhood, has already prepared and mailed to organization members a letter acquainting them with the new

road bill now before the Minnesota legislature. Promptness is necessary in the case of obnoxious bills, and Brother Gens seems to have that quality.

Rev. Earl E. Isenhower, Vincennes, Indiana, preaches on Sunday and threshes on Monday, during the threshing season. He owns and operates a threshing outfit, takes his Bible along and teaches and preaches religion in his daily life.



A Thresher of Men.

The Second Christian Church of Vincennes, realizing that he is a real minister, made overtures to secure his services; after having invited him to preach a sample of his gospel, and with the understanding that he is to have two months vacation every year during threshing season, he is drawing a salary commensurate with his services. And this is a real salary, as the editor happens to know.

During the recent session of the Indiana Brotherhood's convention, Brother E. Isenhower presided as chaplain; he was unanimously elected chaplain of the Indiana Brotherhood of Threshermen. It is to be hoped that at its next annual session, the National Association of Brotherhoods of Threshermen will do likewise and thus honor one of our brethren who is both a preacher and a thresherman, and who makes a full hand at both.

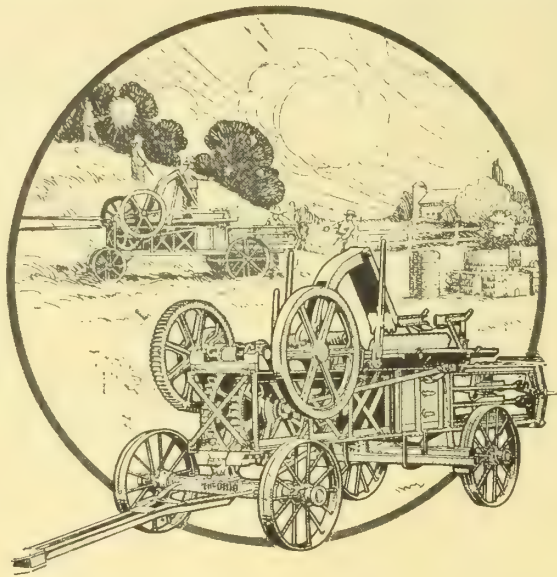
We have been quite busy the last few weeks and are laying the foundation for a much bigger year than we have ever had before and we expect our annual convention which will be held in Sioux Falls, March 15, 16, 17 to be the best attended and the most enthusiastic meeting that we have ever had. The threshermen of South Dakota are now fully awake and realize the importance of maintaining their thresher organization and bringing it up to the highest possible place, as we are now in position to give them all the protection along insurance lines that they can ask for; we are furnishing it at a small fraction of what they are in the habit of paying.

This alone is sufficient reason to hold any association together; but when one thinks of the voice threshermen now have in their legislature and the added prestige which eventually comes from being a member of such an organization there isn't anyone who can afford to stay out of the South Dakota Brotherhood.

Mr. Borneman tells me that he succeeded in getting Uncle Silas to promise to attend our convention and we hope that nothing will



This Picture Explains Why the Staid Citizens of Harrisburg, Pennsylvania, Wanted to Know the Answer to the Question, "What's the Big Crowd in Town for?" This Picture Was Taken on January 28, the Picture and the Report of the Pennsylvania Convention Were Hurried to Madison—and Here You Have It in the February Issue.



The Famous Ohio Hay Press— “The Baler With a Safety Valve”

Nobody would want a steam engine without a safety valve. But the safety valve on the boiler is hardly more important than the relief clutch on the feeder of the Famous Ohio Baling Press.

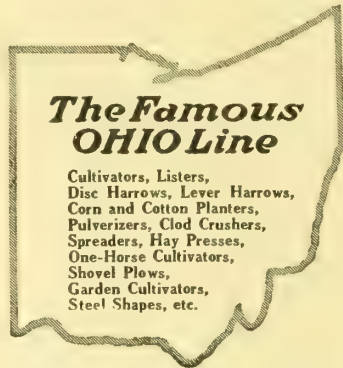
It is almost impossible to strip the gears or break the feed-arm. At a pressure of 750 pounds—which might be caused by overfeeding or by an obstruction of some sort—the clutch is automatically released and all damage prevented.

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prevent his coming. We can promise that he will not leave us without being impressed with the future possibility of organization work in this state.

W. A. SWARK.
Secretary-Treasurer.

Three hundred members attended the Wisconsin convention last year. In spite of increased passenger fares, it is expected that more men will be present this year, for the legislature deserves—maybe needs—some close attention. The clan will gather on Washington's birthday; that evening Governor Blaine and several manufacturers will give addresses.

February 23 will be the big day, and from 9 A. M. until midnight there will be plenty of business and pleasure to satisfy all. Committee work, addresses by Uncle Silas and W. H. Newsom, the big banquet and the Orpheum vaudeville program will be outstanding features. All brothers will want to be on hand at the election of officers on February 24, the closing day of the convention.

Brother Gildemeister started a real argument when he spoke of the great advantages of a steam engine over a gas outfit, at the Minnesota convention. The steam engine men seemed to outnumber the gasoline advocates, but H. F. Borneman, who was a visiting member from South Dakota, gave some interesting figures on the matter of threshing with gasoline.

The following letter explains why outsiders have confidence in the new North Dakota organization:

“I am dropping you a line to let you know that the threshermen of North Dakota have finally come to life. A very successful state convention was held on January 4, at Fargo, North Dakota, at which a full state organization was perfected.

“W. H. Newsom, president of the national organization, was present and enlivened the convention with many witty speeches, telling of what had been accomplished in the nineteen states already organized. J. B. Parker of Indianapolis, Indiana, was also one of the live wires who assisted in starting the ball rolling. H. F. Borneman, of Sioux Falls, South Dakota, president of the South Dakota Brotherhood of Threshermen, also attended and told of the wonderful success of the movement in South Dakota. His statement that the South Dakota Brotherhood in its eighteen months of organization had saved to the members \$154,000 on insurance alone should recommend the Brotherhood to all threshermen. The canvass for membership in the state is now well under way, the plan outlined by the executive committee being to put a solicitor in each county to sign up memberships. It is

planned to have the next meeting in June, 1921, at some point in the state convenient to the membership, at which time we hope to show that the twentieth state joining the Brotherhood is a record breaker.

“We want some good live solicitors in every county and will pay liberal commissions to any one qualified to make a thorough canvass, and they can get full details by writing me at 325 9th Avenue, South, Fargo, North Dakota.”

E. R. BRADLEY,
Secretary-Treasurer.

With constructive work of this sort well under way (less than three weeks after the date of organizing) it is hard to see how North Dakota can fail to have a beneficial organization.

The eleventh annual convention of the Minnesota Brotherhood of Threshermen convened on Tuesday, January 4. The forenoon was given to registration of members. The afternoon meeting was called to order by President H. C. Gildemeister, Gaylord, Minnesota. After an address on “Organization and Needed Legislation,” Mr. Lundhagen of Minneapolis took the floor and read the Proposed Uniform Vehicle law as applying to the Babcock plan. Next Mr. C. E. Moore, attorney for the National Vehicle Manufacturers' Association spoke on needed uniform national laws that would not work to the detriment of manufacturers or producers.

After these talks, special committees were appointed. On Wednesday morning, January 5, an address of welcome was given by the mayor of Minneapolis, who talked on good roads and told the threshermen to educate themselves and have an educating campaign as to cost of operating their machinery.

The minutes of the last meeting were read and accepted, then the secretary-treasurer's report was read and accepted. J. B. Parker of The American Thresherman and Farm Power spoke on “Organization, and Why a Thresherman Should Belong to the Brotherhood.” W. H. Newsom, president of the National Association, then told what the National Association was doing for threshermen and also spoke on the Proposed Vehicle law.

The Wednesday afternoon session was a joint meeting with the University Farm faculty. Professor Bassett spoke on “Repair Service and how to Order Repairs.” He said that everyone should look over his machinery, when through with the fall run, and find out what is needed, instead of allowing worn parts to remain until the following season.

Professor William Boss spoke next, explaining what the University was doing for the thresherman and

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Don't tolerate a scaled boiler. It is a financial drain on your equipment that inevitably raises your cost of operation.

The first symptoms of scale are a seemingly slowing down of power coupled with an unusually heavy consumption of fuel. As the trouble grows in time, the more dangerous it becomes, for the hard coating or crust forming on the inside of the boiler soon weakens and deteriorates it and shortens its life.

Get rid of boiler scale by introducing with your feed water the dependable

U. S. G. Co's Mexican Boiler Graphite

It is the only sure and safe scale remedy. Sure, because it acts on scale of the longest standing—safe, because it does it without harm to the boiler.

Try it. Send us this advertisement with your name and address, and we will mail you booklet and other valuable information.

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MR. FARMER—

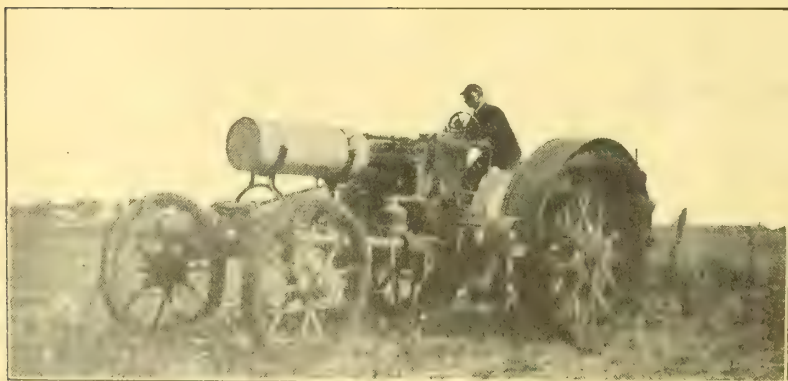
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Before You Buy
a Tractor"*



UNDER TEST



farmer. He discussed small versus large threshing machines, saying that the reason farmers bought small machines was because some threshermen do not give the right kind of work.

There was next a discussion on steam versus gas power. H. C. Gildemeister stated that steam was the best power for threshing, and he was supported by some of the members present. He was answered by other members and by President Borneman of the South Dakota Brotherhood that gas was just as good.

Mr. Van Valkenberg, who is with the Avery Company, talked on "What a Machine Should Do and Why It Sometimes Does not Do It," telling how to adjust the concaves and the speed of the separator. A report on the National Association was then given by President W. H. Newsom.

That evening all attended the banquet given by the Tractor and Trade Association, which was very much appreciated by all the members. Mr. Wagner, toastmaster, gave a fine talk to the members and said that he was glad to see so many threshermen present. Mr. C. H. MacKinza of Gaylord, Minnesota, responded for the Brotherhood. Mr. Van Volkenberg said that the Tractor and Trade Association of Minneapolis would help the threshermen to get a stronger organization in Minnesota.

President Borneman of the South Dakota Brotherhood gave an interesting talk, telling what they were doing in South Dakota. Chas. Hahn of Gaylord, Minnesota, being the oldest thresherman in the state, told of his experience and hardships during the earlier days. He has been in the threshing game for fifty-six years, and has been with his outfit every day during these seasons.

Thursday morning was devoted to discussing insurance. The insurance laws were explained by Chas. G. Wright, who presented amendments to insurance laws. At the present time the threshermen of Minnesota cannot organize a Fire Insurance Company and the insurance committee was instructed to meet with the insurance commissioner at St. Paul to draft a special bill. Not only will this enable the threshermen to organize a fire insurance company but also allow any man owning and operating a threshing machine to come under the compensation act.

H. C. Gildemeister was chosen as a delegate to the Indiana convention, with F. D. Morrill, Janesville, as alternate. These men were also elected as delegates to the National Association Convention which is to be held in Chicago next November.

After a lively argument as to taxing threshing machinery, the report of the resolution's committee

was read and accepted. Some were against threshing machinery being included. It was voted on, however, and the "ayes" carried. The rate of tax to be five cents for each hundred-weight.

The following officers were elected: president, H. C. Gildemeister, Gaylord; vice president, F. A. Monson, Nicolet; secretary-treasurer, H. T. Gens, 427 Byron St., Mankato; legislative, J. E. Gardner, Minneapolis; insurance, Adolph Hoehn, Madison Lake; executive, John F. Johnson, Anoka.

Installation of officers of the Minnesota Brotherhood of Threshermen was conducted by W. H. Newsom, which was followed by an auction of articles donated to the Brotherhood by exhibitors; after the auction final adjournment took place.

The 1922 meeting will be held at the West Hotel, Minneapolis, Minnesota, January 3, 4 and 5, 1922. Mark the date and place on the last page of your 1921 calendar, and plan to be with us in 1922.

H. T. GENS,
Secretary-Treasurer.

The Pennsylvania Threshermen's and Farmer's Protective Association held its annual convention at Harrisburg, January 27, 28 and 29. That the convention was ably "covered" by officers and reporters is proved by the complete minutes, consisting of eighteen typewritten pages. These minutes were made available through the kindness of J. A. Rose, secretary.

The convention opened with the address of H. S. Lee, president, on "Our Organization." This address covered the seven years' work of the association and its aims and purposes for the future. Uniform vehicle laws and mutual compensation insurance were given special attention.

J. B. Parker of Indianapolis, in making his address, praised the operation of the Pennsylvania insurance plan, and said it had saved the threshermen of the state \$150,000. Mr. Parker made clear that he opposes the licensing of traction engine operators.

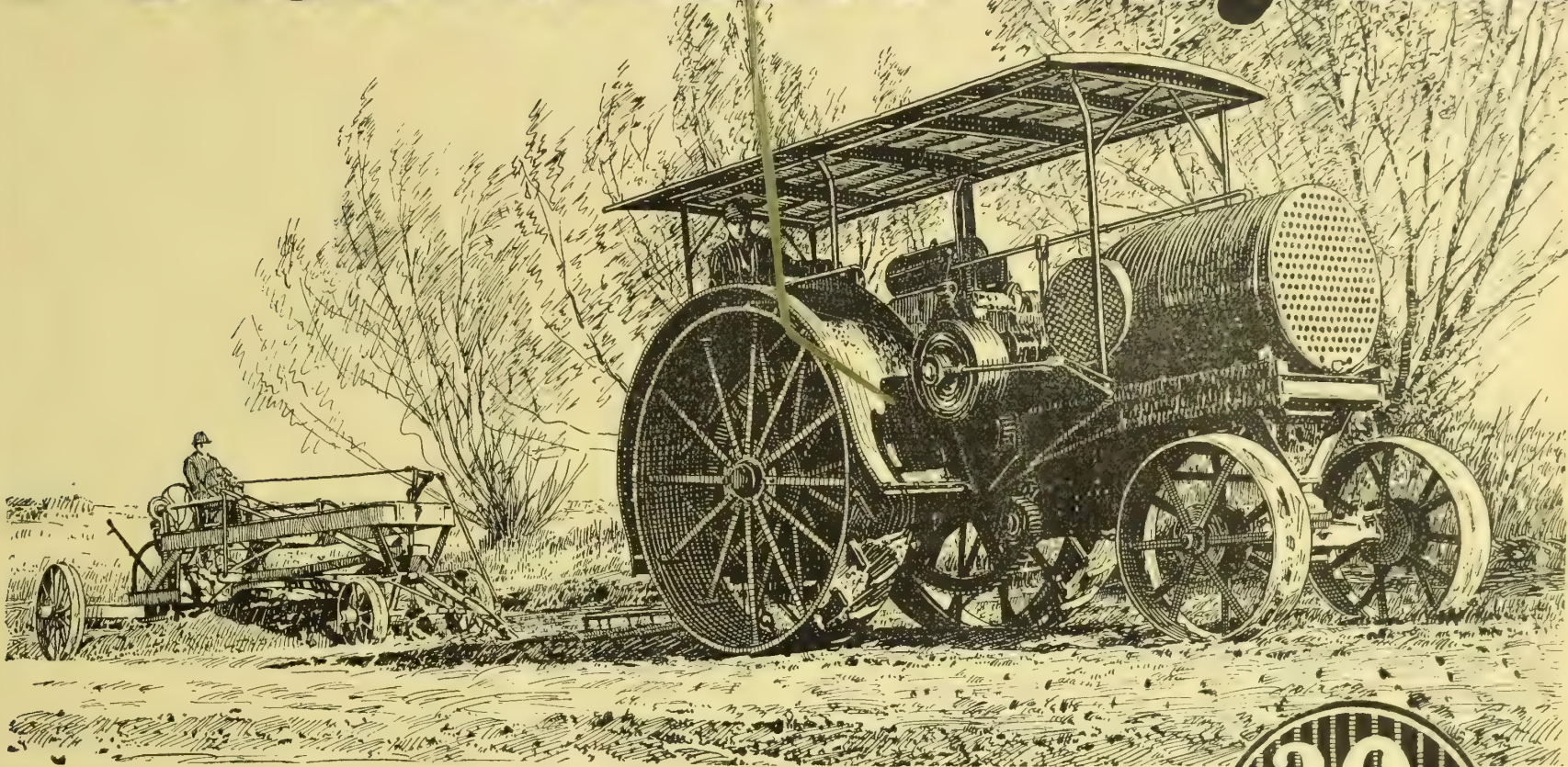
Harry Meixell, Jr., a member of the Motor Vehicle Conference Committee, New York City, then told of his intimate experience with New York and New Jersey conditions.

In appointing a nominating committee of seven members, and a resolutions committee of thirteen members, the officers started a discussion which resulted in a motion being made that the by-laws of the association be read aloud. After some debate, this motion was defeated.

At the first evening session, the mayor of Harrisburg and the state secretary of agriculture made addresses to the threshermen. Music by the orchestra and impersonations

(Continued on page 42.)

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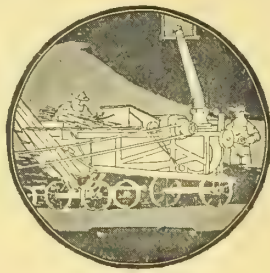
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"I demand ROCKWOOD, The Drive Pulley, on every belt-driven machine I buy." Farmers all over the country are saying this to their neighbors—and to the men who sell farm power machines.

ROCKWOOD, The Drive Pulley, has proved itself to be the one, efficient drive pulley. Threshermen know it as the pulley that gives steady, dependable service—that goes through year after year of heavy duty without trouble or expense of repairs.

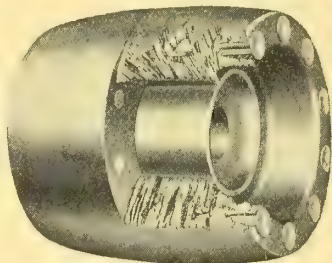
ROCKWOOD The DRIVE PULLEY

Threshermen naturally prefer a separator that is Rockwood-equipped to one which is not.

Rockwood, The Drive Pulley, is the standard pulley on more than eighteen of the leading makes of farm power machines, including Avery, Port Huron, New Racine, Huber, Banting, Wood Brothers, Frick, Aultman & Taylor, Minneapolis, Cape, Illinois, Ross, Ann Arbor, Layne & Bowler, National and Fordson Tractors.

Every threshing machine—old as well as new—should have on it Rockwood, The Drive Pulley. If your present machine does not, order through your dealer or we will ship direct. Write today for free descriptive booklet, giving prices, sizes and complete information.

ROCKWOOD, The Drive Pulley, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—



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a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, The Drive Pulley, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

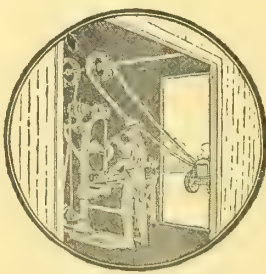
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Correspondence

During a heavy storm in our section recently, a granary burst and the grain had to be moved, regardless of road conditions. We loaded two hundred bushel on each of three tractors, and by cleaning the lugs several times, made the trip of sixteen miles in about four and one-half hours. The entire amount of wheat on the fourteen wagons was eleven hundred and sixty bushels, six hundred of which were on the three tractors.

served every issue. How many other threshermen have done this? Speak out, brethren.

I am not a thresherman any more, having quit about eight years ago. For the last four years I have been employed as inspector in the State Highway Department, getting my job through the Civil Service. This keeps me busy six to eight months during the year. The rest of the time I spend in repairing and doing odd jobs for



Going Through the Main Street of Floydada.

Twenty horses pulling five hundred and sixty bushels. The tractors out-traveled the teams.

You will see by the picture I am sending that the streets have much water standing in them, as had also the roads in the country.

Of course two hundred bushels is not a load for the tractors except on account of road conditions. As one of the tractors was mine, I know just the amount of load and fuel taken:

Wheat 12,000 pounds.

Wagons 4,000 pounds.

Fuel consumption, seventeen miles, nine gallons of gasoline.

We consider this a very good record as the roads were considered impassible with loads by most people. My tractor broke the road.

W. D. RAMSEY.

Floydada, Tex.

About six or eight years ago I wrote the prize sawmill article for The American Thresherman and Farm Power. It surely brought me a bunch of mail. From nine different states, I think, came letters and postals of approval and congratulations. Some asked for plans for the wire cable feed of my mill and others for the patterns. One man wanted me to send him a set of castings similar to the one on my mill. As late as last year, I received a letter from a man in Maine asking for specifications of the mill that I wrote about in my article.

A protest came from a machine company which thought I was discriminating in favor of the drag saw-dust elevator as against the blower. Now I was not knocking the blower at all, when you have plenty of power to run it; but if you have not, then use the drag.

I am one of your oldest subscribers, having subscribed for the first issue, Volume 1, Number 1, and I have pre-

people, and in the winter, when the weather is fit, I run my sawmill.

If I were a young man just starting out, I would surely take advantage of some of Uncle Sile's offers of Wisconsin land as land is becoming scarcer every year and, of course, higher in price.

Like you, Uncle, I have done everything from teaching music to eating dust at the tail end of an old ground power threshing machine; and I haven't got rich yet. In fact, I have given up the notion entirely.

The roads in this country are very bad and the bridges not much better. I often think that the following little verse some witty fellow struck up, where there were three autos mired to the axles and which had to be pulled out with blocks, was very appropriate:

"This road is impassible,
Not even jackassable;
If this road you must travel,
Just bring your own gravel."

I wonder how many of my brother threshermen have a "hobby" and ride it as I do? My "hobby" is to collect antiques, such as Indian relics, old coins, old flint lock guns, old books and documents, and old furniture. I have a regular museum and will buy more. If the boys have anything along this line, just let them write me. JOHN A. PAUL.

Batavia, O.

I have a 32x56 Advance separator with feeder, weigher and blower. I wish to pull my oil tank behind the separator. Can you suggest a plan to put a hitch on the rear of the separator so it will not pull sideways against the blower frame or injure the frame of the separator when making short turns? How heavy should be the material with which to make this hitch? This hitch must be strong, for my oil tank holds five hundred gal-

lons when it is full. I hope you or someone else will be able to help me out of this hitch trouble.

FOREST C. POGUE.

Jamesport, Mo.

(Editor's Note: Perhaps some reader has already encountered and overcome this difficulty. A few lines to Mr. Pogue or to the magazine will be highly appreciated.)

I have been in the threshing business for twelve years. I own a new Peerless outfit, which does good work. My best run during 1919 was eleven hundred bushels of oats in six hours.

The hills are quite steep in this part of the country. I pull hills that all other threshermen must go around. I thresh wheat, oats, rye, millet, peas and beans, but I am thinking of quitting as help is so hard to get.

The acreage of wheat sown last fall was very small and the condition of the crop is very poor.

C. H. SMITH.

McMinnville, Tenn.

I should like to have some of the readers of The American Thresherman and Farm Power tell me through the Correspondence Department what they consider the right and the wrong way of threshing timothy. Should the heads or the butts go through first, and why?

Delhi, Ia. NIEDORF BROS.

(Editor's Note: The heads should go through first, we say. Then the cylinder is given a chance to thresh out the grain before the straw is whipped through. What is your experience?)

The latter part of August, we had an accident with our little machine. I had charge of the threshing this year. One of my helpers, a colored man by the name of Frank Walker, was working on the thresher cylinder, when his overalls jacket caught between the wind stacker pulley and the drive pulley. He was standing on the ground, reaching over the seven-inch driving belt, when it happened. He was rushed to the hospital, and it was found that his arm had been broken in three places.

The doctor here thought his arm would have to be amputated at once, but the doctor at the hospital thinks the arm can be saved, but is afraid he will have a stiff elbow.

My engineer is also a negro. About four years ago, he got his arm cut off with a corn husker. With his left arm he can guide a left-hand guide engine, work the throttle with his false arm and can operate an engine as well as any fellow who has two arms.

Frank Walker was a separator man. I noticed that he had been very careless, and I had warned him several times before the accident happened. Well, I guess accidents will happen with all makes of machines.

I am running a small Peerless twenty eight-inch engine. In eight hours' time, we threshed eight hundred and twenty-three bushels of oats. We call this very good for this part of the country. Long live The Thresherman!

GEORGE H. GOULDTHORPE.

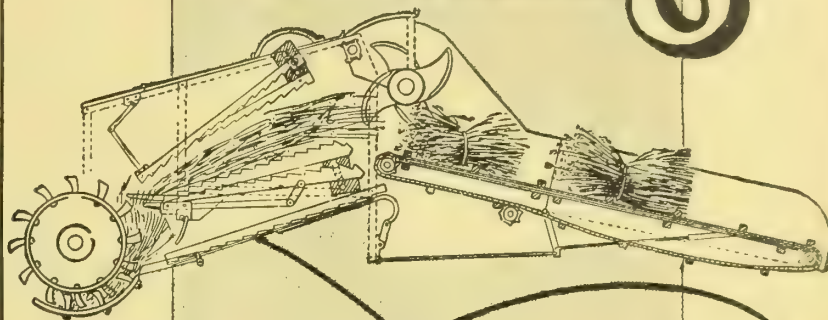
Warrenton, Va.

I am back again. I have been out of the threshing game for eight or nine years, but am again threshing with a man who is a good machine man and who has a good outfit. It consists of a 50-horse power Case engine and a 32x54 Case separator. It is some machine. When we set down to thresh a job, we thresh. Each man knows his place and is always there. This man furnishes three men beside himself. The owner runs the engine and looks after the separator, although he has a separator man, fireman and water boy.

We threshed at the rate of one thousand bushels a day or more, and sometimes made three or four sets per day. There was a lot of oats on one of our runs; we threshed one set of oats, 998½ bushels, in three hours. Some one timed us for a while and said that we were threshing at the rate of ten bushels per minute. We had to wait twice for the wagon that hauled the loose oats to the bin. They could not haul grain away from the machine fast enough. We charged twelve cents for wheat and six cents for oats.

There are a few price cutters yet. I will say this: A man can not run his machine on too close a margin. Everything is too high and repairs

A real aid to fast threshing!



YOU know the enthusiasm a mechanic gets from working with good tools. It seems as if everything's just breaking right.

Likewise with the threshing rig. A good self feeder is as important to the operator as good tools are to the mechanic.

Speaking of feeders, it is a striking truth that operators who have seen years and years of threshing prefer the Garden City Self Feeder. It's their choice, almost unanimously.

Treat your separator to a Garden City this year and watch how much better work it does.

Write for name of nearest distributor.

Garden City Feeder Co.
Pella, Iowa

Garden City self-feeder



Baker Brothers, Chatfield, Minnesota, Built Their Own Sawmill. Now They Are Making the Tractor Pay for Its Winter Depreciation.

Red Devil—

"RED DEVIL" TOOLS

Make Your Handiness Count 100%

You want the better sort of tools to enable you to do your repair work more efficiently. Do away with the poor tool handicap—make your handiness count. Keep a set of "Red Devil" Tools handy at all times and get the full measure of tool satisfaction.



Red Devil Wrench Set No. 91

A handy set of tools for gas engine, tractor and motor repairs. Powerful—handier than a monkey wrench. Made from open hearth steel, heat treated for strength. Openings from $\frac{7}{16}$ " to 1". Five wrenches to set, each set in a box.

For sale by all good hardware dealers. If not obtainable, send \$1.00 for a sample set. Mention style No. 91.

Write today for free booklet, "Red Devil" Tools on the Farm."

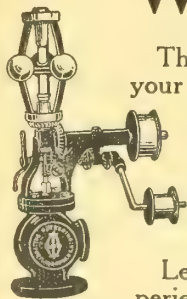
Smith & Hemenway Co., Inc.

270 Broadway

New York, N. Y.

Manufacturers of Pliers, Screw Drivers, Glass Cutters, Chain Drills, Hack Saw Frames and Blades, Snips, Auger Bits, Lock Washers, etc.

Winter Overhauling

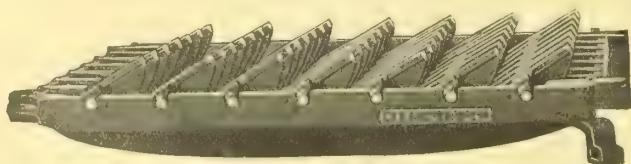


The Winter affords a good opportunity to look over your Farm equipment, preparing for a season of continued service, and if at this time you see the need of a new Governor, do not wait until the last minute to order it, but give us details now, so that delivery can be effected at a time convenient for you to install.

Let us submit a proposition and tell you of others' experience, for this will involve no obligation as to eventual purchase, but reassure you in installing a "Pickering Ball Ranger."

This type requires no particular explanation, because of the wonderful showing it has made in the past twelve years that it has been on the market.

The Pickering Governor Co., Portland, Conn., U. S. A.



Attention to Your Firing Problems

It is easy to equip your engine with the Quick Detachable Travis Rocker Grates. Change them now, because the old style straight bar grates are out of date.

The Travis System of firing on Rocker Grates cannot be improved upon.

If you are thinking of improving your firing conditions, drop us a card, and we will give you full information on how easily our grates are installed, how easy it is to fire on them, how easy it is to replace the old style straight bar grates with Rocker Grates, and how cinders are consumed as fuel.

Equip your new engine with Travis Rocker Grates.

Repairs for Travis Rocker Grates

are furnished for all our Rocker Grates now in use. Give the number on the casting or style and dimensions. For prices on Travis Rocker Grates, give size of your fire box.

G. E. TRAVIS COMPANY

--

HENRY, ILLINOIS

are high and a machine costs something, too. There was one machine which threshed all day on two loads of wheat. The farmer on that place wants this machine to thresh on that same run. They told us that they never had a machine in there and thresh, and move out as this one did.

One man told me that a machine which threshed for him last year was there for eleven days,—and his wife had to cook for them. It rained every other day, and the machine men stayed there. We never aim to stay more than one night in one place.

I wish to say this: Let each threshing machine man have his price. Do not allow the man you thresh for to set your prices, for if you do, he will want it done for nothing; as there are some who started out to charge twelve cents per bushel and some of them wanted it done for ten cents. Some charged nine and ten cents, but they surely came out at the small end of the horn. When they figure up expenses and repairs and labor, they do not count the wear and tear on their machines. They simply got three or four jobs or merely got something to eat.

We were intending to put a Larson automatic blast regulator and speed indicator on this separator, but it did not arrive until we were through threshing this season. I wish any thresherman who has one of these attachments and must use it this season, would write me about it, as I would enjoy hearing from some one who has used one of them.

The wheat we threshed turned out well, and I should like to send a photograph of this outfit, but did not have any taken.

I have been a subscriber to The American Thresherman and Farm Power for a good many years, and think it a mighty good paper. I think the threshermen should co-operate more than they do. The old

saying, "United you stand, divided you fall," is quite true. Why not get a uniform price and all charge the same price, and in this way there will not be so much "kick" among the farmers. They want all they can get for what they sell, so why not let the threshermen get their prices for threshing?

I will say this for myself; that the run we had this year, 1920, was a nice run and all of the people treated us well. Nothing seemed too good for us. The women, especially, treated us very kindly and were good cooks too. One of us always stayed with the machine. We preferred sleeping in the barn, but they would not hear to it at all, so had to go to the house to sleep. In nearly every place we went, we found the folks of the house very hospitable.

Another thing that I can say in regard to this run we had, was that it was a nice, clean run. Not a word or racket was heard among the men. We had a truck with which to haul the wheat to the elevators, but did not use it this year on account of our not having storage room. Next year, if nothing happens, we expect to use a truck equipped with a water tank to haul water for the engine, as we experienced some difficulty in getting good water.

During the year 1919 I was working for a man by the month as a teamster and pitcher. They expected the teamsters to bring their dinners with them, and would not give them their suppers. The boys soon said that they would either have to give them their suppers, or they would stop threshing. One fellow refused to give the boys their supper, and it rained that night, so he had to give them dinner the next day. It would have been much cheaper for him if he had given them their supper that night and had the job finished up.

Leesbur, O.

H. WILLIAMS.

Help in Tire Trouble

BY B. H. WIKE

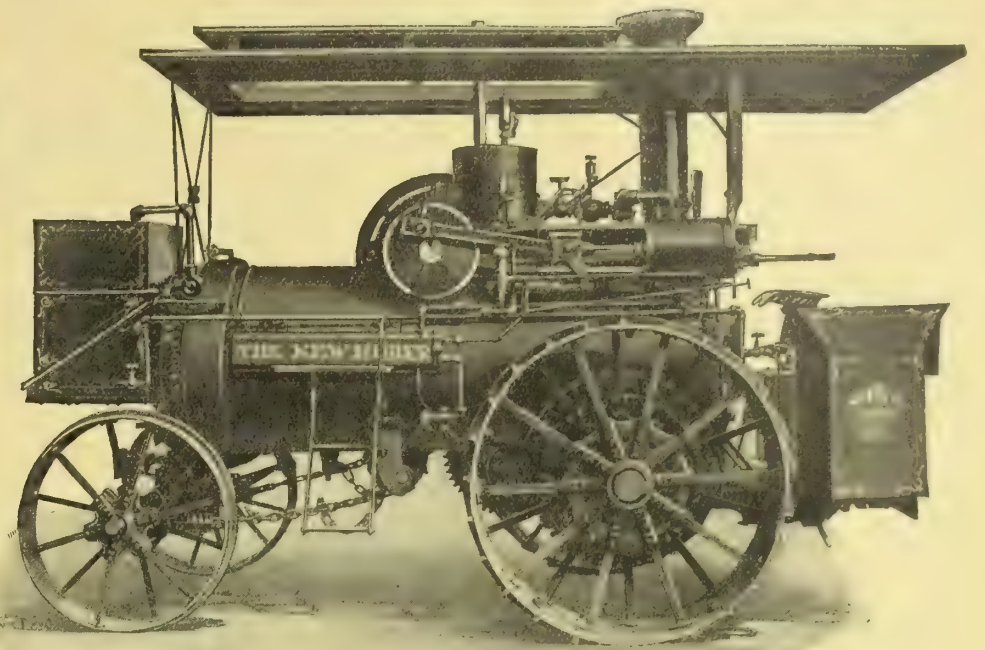
THERE are several causes of tire trouble, and the makers of all good tires usually base their mileage adjustment upon certain conditions which rest mainly with the driver. These manufacturers expect the car owner to watch his tires just as much as the maker of the car expects him to do his part in keeping the car from complaining during the term of the guarantee. We have seen many tires ruined from thoughtlessness. These tires were giving good service but the driver evidently forgot certain things were necessary to enable the tire to stand up under the strain.

One of the most common causes of tire trouble is under-inflation. Tires

are made with the expectation that a certain amount of air be pumped into that tire and kept there by frequent additions as necessity requires. A casing may look to be full as the car stands on a flat, hard surface, but on testing, it may be found that the pressure is far below what it was thought to be. Some drivers get it into their heads that a soft tire makes less vibration. It does more than this, it makes a car ride velvety. But in either instance the car owner does not know that he is losing money other ways. Soft tires encourage rim-cutting, they allow rocks to cut gashes much easier, and make the motor work harder, thereby using more gasoline and oil. To prove this

Leadership

That is Based
on 44 Years
of Knowing
How!



SINCE 1877 Huber Steam Traction Engines and Huber Separators have been known among threshermen as equipment that was not excelled anywhere.

New **HUBER** Threshing Outfit

continues that reputation. It is most profitable to the thresherman, because it saves fuel, gets work done fast and efficiently, and lasts. It is most profitable to the farmer, because it "Saves the Grain."

The New Huber Steam Traction Engines

are made in 16, 18, 22 and 25 horse power sizes. The Huber Return flue boiler completely surrounds the fire with water, consumes every bit of fuel and conserves heat. It is without a peer for economy and safety. Flues are accessible from either end with no crawling into the fire box. There are no stay bolts to rust or leak.

Huber boilers are mounted upon a rear liveaxle with over-size bearings. The higher mounting gives greater road clearance. All spur gear drive delivers power to the wheels with a minimum of friction and wear. Every detail in the Huber Engine is right—as strong relatively as the others.

Write for booklet, "More for Less."

The New Huber Western Special Separator

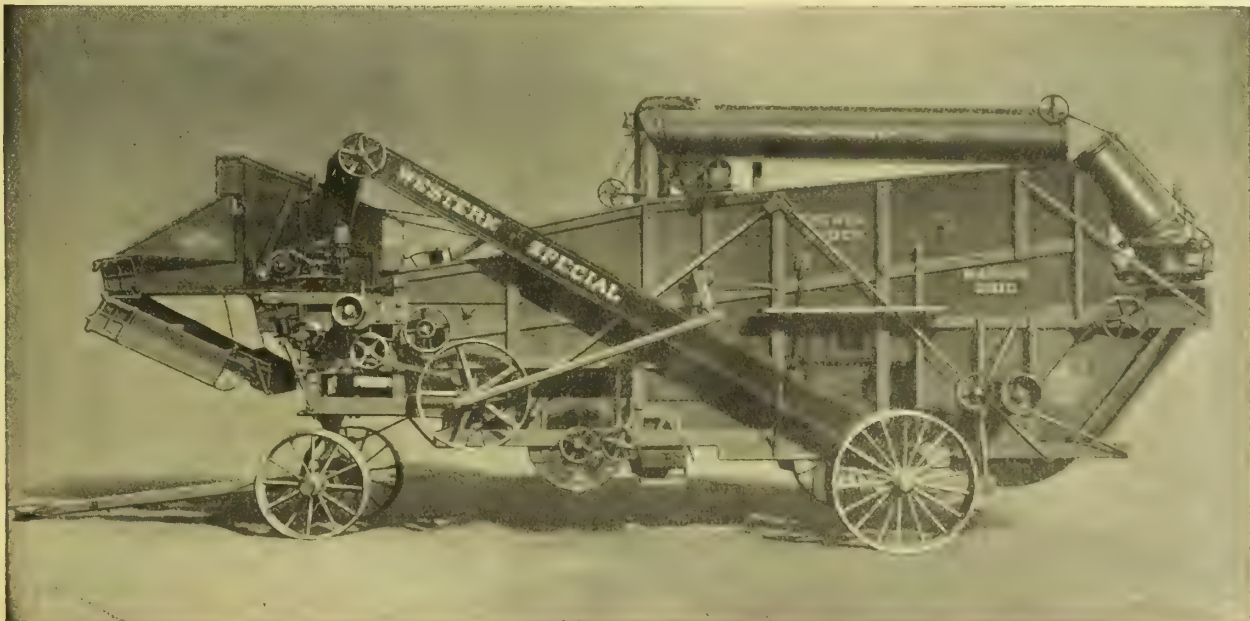
works faster with less vibration. The counterbalanced straw stacks kill vibration, because as one goes up the other comes down. There is maximum of grain agitation with a minimum of vibration. This insures a good clean job of threshing and guarantees long life to the machine.

In long straw or short the 12-bar cylinder and adjustable concaves for front and rear do good work. The New Huber is double belted. Automatic belt tighteners keep the tension greatest when the load is greatest, regardless of stretch or shrinkage of the belts. Power is carried from pulleys at each cylinder end of the shaft to every moving part.

Write for booklet, "It Saves the Grain."

Huber Manufacturing Co. 445 Center Street **Marion, Ohio**
Makers of Huber Light Four Tractor

BRANCHES: Harrisburg, Pa. Lansing, Mich. Indianapolis, Ind. Peoria, Ill. Wichita, Kans. Crowley, La.
Des Moines, Iowa Lincoln, Nebr. Minneapolis, Minn. Fargo, N. D. CANADIAN BRANCH, Brandon, Man.



Building Stamina into Case Tractors

IN CASE shops, under the terrific impact of a constant stream of accelerated blows of huge steam hammers, white hot, high carbon steel is accurately formed into forged driving gears, steering gears, front axles, crank shafts, cam shafts, connecting rods, valve rocker arms and numerous other important parts of Case tractors.

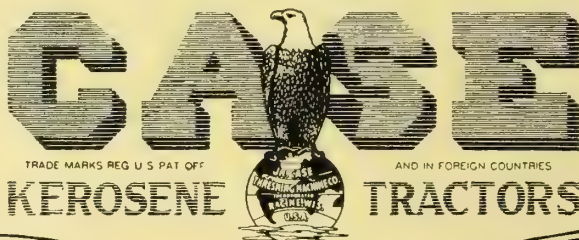
The many high-grade, steel forgings, heat treated and carbonized, put strength and durability into Case tractors without unnecessary weight.

These items are only a few indications of the high quality features that make Case tractors superior.

Each part that goes into the construction of Case Tractors is made and put in place with the same conscientious, efficient thoroughness that marks the manufacture of every forged part.

Extra strength is built into Case tractors to protect Case users against delay and loss frequently experienced with tractors not made to the Case standard.

J. I. Case Threshing Machine Company
Dept. A451 - Racine, -



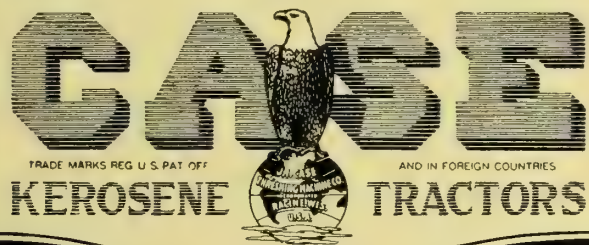
WHEN STAMINA COUNTS

AFTER several seasons of hard, continuous service—Case tractors pulling plows through heavysod, or gumbo; driving threshers—slashing through tough, mouldy, stack-burnt bundles; when it seems that iron and steel must give way under the strain—then is demonstrated the value of the painstaking care and effort, the skill and high quality materials that are combined in building stamina into Case Tractors.

Threshermen or farmers operating Case tractors can do all drawbar and belt jobs profitably and with least delay. Because of inbuilt stamina Case tractors are most dependable.

Continuous service—plowing, discing, seeding, threshing—requires stamina; especially if unfavorable weather makes the season late and extensive acreage must be covered in the shortest possible time.

J. I. Case Threshing Machine Company
Dept. A451 Racine, Wisconsin



"She Keeps the Old Machine Going"

That is what experienced threshermen say about the

Nichols-Shepard Oil-Gas Tractor

It was designed with one purpose in view—to give the thresherman the ideal power he has always wanted in an oil-gas tractor. Built by men who have made a life specialty of building threshing outfits. It keeps the thresher running steadily under the most trying conditions and lasts for years.

It's good for more than threshing. It fills every place in general tractor work economically, burning either kerosene, gasoline, or distillate.

Messrs. Cook & Olson, Eagle Bend, Minnesota, say:

"As you know, we are running our Red River Special Separator with one of your Oil-Gas Tractors. We find we can do considerable more threshing with this tractor than with steam, as there is no waiting to get up steam, for water, or for fuel. She is always ready for business and has plenty of reserve power."

You can't afford to take chances with the power end of your outfit. Decide to make this season's run with a reliable power unit—a Nichols-Shepard Oil-Gas Tractor.

Write for Circulars

Nichols & Shepard Co.
Battle Creek, Michigan

In Continuous Business Since 1848

Builders Exclusively of Red River Special threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines.

Women's Department

Opportunity

They do me wrong, who say I come no more,
When once I knock and fail to find you in;
For every day I stand outside your door,
And bid you wake and rise to fight and win.
Each night I burn the records of the day,
At sunrise every soul is born again.
—Selected.

Attention, Mothers!

Attention, mothers! The editor of the Women's Department wants you to know of a movement, something over a year old, that is promising much for the health of the rising generation, which includes your children, who are growing up. It is the Modern Health Crusade and we tried to give the children of The American Thresherman and Farm Power family a wee bit of an introduction to it in last month's issue. It is sure to interest them but, as all mothers know, little tots soon forget their interests, unless there is some one older to help them remember. So we want to tell you mothers that the Modern Health Crusade is one of the "helps" that will assist you to start your children on a road toward perfect health, which brings in its train a happy and useful life.

The Health Crusade is supposed to be promoted and carried on through the public schools, but we find that many of our rural schools have not been reached and that is why we are trying to reach the mothers of our paper. Will you not learn the few facts here presented and, if your children's school is doing no work of this kind, can not you talk with the teacher about it and perhaps get her to write either to your state superintendent or to the State Health Department and ask them to help you introduce the work?

The Modern Health Crusade is a movement that has enlisted more than four million American children. It is essentially a system of teaching hygiene that imparts good health habits. Through elements of play and romance, and various appeals suited to child psychology, it gives children the motive needed for the practice of hygiene. Under the Crusade system pupils *do* the duties which are explained in books of physiology and hygiene but too often left undone.

This is the principle on which the Modern Health Crusade is based. The Crusade does not "bother" the child with hygiene and physiology. It is a game which the child eagerly plays, and in the midst of this play is gaining health and happiness.

The Modern Health Crusade is really a health game in which the children are little pages, squires, knights and knight bannerets on the "Field of the Knights of Health." They fight the "Dragon of Disease" by doing simple health "chores" which later become health habits and build up the bodies of the little ones.

Everyday habits are surrounded by the glamour of romance, and need no urging upon the children.

"Dry book teaching" must be forced upon the child; the Modern Health Crusades are looked forward to with eagerness by the children.

Each school year there are two "Tournaments of Health Chivalry" of the Modern Health Crusade—one in the fall and winter, and the other in the spring. The children perform their health chores in order to help their school win a pennant in the state and national Modern Health Crusade tournaments. There may also be inter-class or inter-school contests or pageants to make the Crusades more exciting and pleasing.

The results of the Crusade are physical improvement and prevention of disease among children and their families, moral discipline and the awakening of community responsibility.

Are the children of your community enrolled and actively engaged in this movement? If not, will you take the necessary steps to start them off?

Splatter Work

BY ROBERT H. MOULTON

A novel, simple, and effective method of decoration for table centers, fire screens, fans, and thousands and one articles of domestic utility and feminine vanity which have lately come into vogue is the so-called splatter-work. The only apparatus required for doing this work is a comb with two varieties of teeth, coarse and fine, an old toothbrush, a stick of India ink, a flat dish with water, and a supply of pins and foliage. Before attempting to decorate fabrics it is well to practice first on a piece of cardboard or heavy paper.

The first step is to pin the leaves or flowers on the cardboard in as pretty a manner as possible, using plenty of pins to keep them as flat as possible. Fronds of ferns make very effective designs and being by nature flat they are easy to fix in the required position. If one is ambitious he may cut pieces of paper into the shape of butterflies or other pretty insects and pin these over the leaves.

When the foliage is in place, a small quantity of water is put into the dish and the ink dissolved in this by rubbing the stick on the side of the dish under the water, care being taken that no grit or lumps get into the water. The water should be good black before it is used.

The next step is to dip the toothbrush in the ink, then, holding the comb an inch or so above the work, draw the hairs of the toothbrush across the teeth. This will cause the

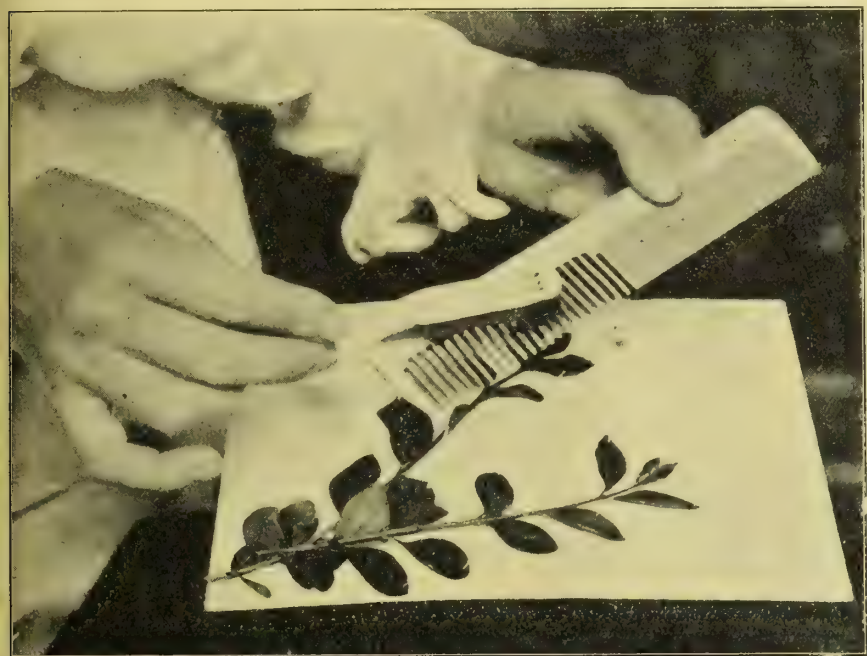
ink to splash or splatter on whatever one is working on, the coarse teeth giving a coarse stipple and the fine teeth the reverse. It is important to get the stipple dense along the outlines of the pattern in order to render it effective, and it can be gradually shaded off lighter and lighter as one gets farther from the design.

After some practice it will be found that one can improve the effect by shading the design itself. This is accomplished by removing a portion of the leaves and putting a thin spatter over the white design formed. Other portions may then be removed

We had not yet heard from the city, where his sweet girl wife was waiting the coronation of her motherhood and I was so anxious to get everything about the old house fixed before she came back to it. At my words, his father looked at our boy and said:

"Well, son, mother seems to be in her hook-and-ladder mood, so I reckon you and I better just jump aboard or she'll steam ahead alone and take all the glory."

From the glances that passed between the two men, I knew I could go to almost any limits, while they were in their present mood. But I



Showing How Splatter Work Is Done.

and the process repeated, thus resulting in a design that will have varying tones upon it.

The best effects may be obtained by using various colored inks, when, with patience and designing ability, some really fine results may be secured. If only part of the material is to be worked on, it will be well to cover the remainder with newspapers to obviate the chance of spoiling it with stray splashes. For the same reason, one should wear an old dress or overalls when working.

The "Leaf" Mother Tucker Turned

BY HERSELF

(Continued from January.)

As I was saying, the first night I went to bed in the old farm house, after the furnace was installed, I was so comfortable and so busy thinking about the other improvements I meant to have made, that I could scarcely sleep! In the morning I said to son and his father, at the breakfast table:

"Now that that barn of a kitchen is warm enough to stay in, without wearing my arctic overshoes and a sweater all the time, I'm going to study out what can be done to make the house work a little simpler, when the children get back."

The look of half-fear and half-joy never failed to shine on son's face at my use of that word "children."

have learned to "strike while the iron is hot," so I sat right down in that kitchen, after breakfast, and made an inventory of things as they *were* and as they *might* be.

In the first place there were the stove and pantry and work-table just about as far apart as they could be placed. When I began to realize how many miles I had traveled, in running from one to another, in the preparation of a single meal, and then multiplied that by the probable number of meals I had prepared, in that blessed old kitchen, and added to that the number of miles all the Turner women, who had done the same things in the same way, before me, had traveled, I fairly turned dizzy! I wished there had been some sort of a pedometer, handed down from one generation to another, that could have revealed the truth. But when I started in on the idea of getting the things from the pantry near the work-table and stove, bless you, there wasn't a place to put things! Why no one had ever had shelves and cupboards built, in that kitchen, I can not say. But there its old walls stood, as bare as a newly paved street. I decided on a cupboard here and shelves there, and when trying to figure out where to have the flour barrel set, it flashed on me,

A kitchen cabinet! Why not?

That was a good start, but only a start. It solved the problem of the

GANDY

THRESHER BELT



For all Farm Machinery—

HERE'S a belt that for more than forty years has been doing a big part of the world's threshing, wood sawing, corn shelling, silage cutting, etc.

Its service is "construction deep."

"Innards" of tough, firmly woven cotton, duck welded by close lock stitching—and flexibility, great endurance, long life put in by the secret-oil-process seasoning.

GANDY BELTING is made in many widths, plies and special end-les.

The genuine is distinguished by the GANDY trademark and PAINTED GREEN EDGE.

GANDY BELTING CO.

Main Office and Factory:
729 West Pratt St. Baltimore, Md.

BRANCHES:
36 Warren St. New York City 549 Washington St. Chicago, Ill.



GANDY THRESHER BELT



PREVENT FIRE

This should be the policy of every traction engine owner. It is not enough to provide yourself with fire fighting apparatus—*don't let the fire start.*

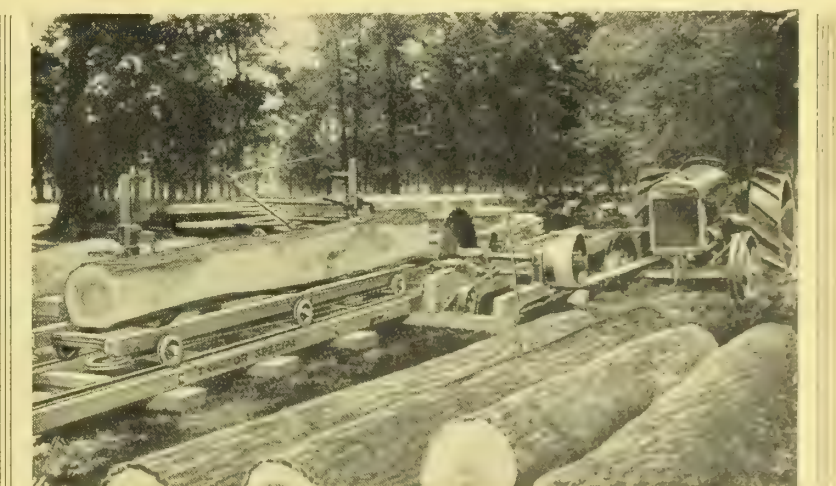
South Bend Spark Arresters

used on traction engines and portable sawmill stacks absolutely prevent flying sparks and will not hinder the draught of your engine.

Write us.

South Bend Spark Arrester Co.

South Bend, Ind.



"HERE'S REAL THRIFT!"

Saw Lumber during the winter months with an Enterprise "Tractor Special" Saw Mill, and you have found a royal road to thrift. You turn your idle time into cold cash; instead of collecting rust your tractor is earning a dividend; and waste timber land and idle logs are converted into serviceable farm lumber.

Why an Enterprise "Tractor Special" Saw Mill?

It is very simple and sturdy in construction, which makes for great durability and economy in power. There are few parts to keep in repair: it is easily moved and set in position; readily operated without previous experience, and the price is right.

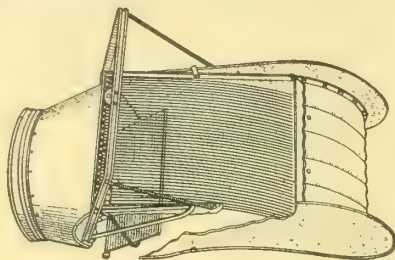
Write today for further particulars

THE ENTERPRISE COMPANY

1050 Main Street
COLUMBIANA, OHIO

Eastern and Export Office:
136 Liberty St., NEW YORK

Save Straw and Chaff by using the Determann Stacker Hood



No wires to clog. No screen to clog.

The operator has complete control over his blast by adjusting the springs on the throat plate according to his speed and amount of straw which goes through the tube.

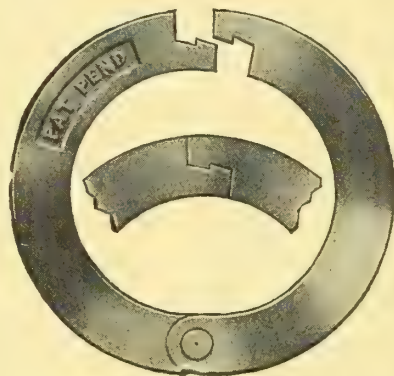
It does not blow any dirt or chaff on the man on the straw pile. It saves more straw and chaff than any other hood made.

You can top off a stack just as good as with a Webb Stacker.

10 days trial free. Agents wanted.

LYONS MACHINE WORKS

LYONS, IOWA



Steel and Brass Overlatch Washers

Take up end-play on shaft without tearing down the machine. A light blow with a hammer, or hammer and punch, closes the latch.

Ask us about **Quick Repair Washers** if you are interested

in saving time and money on your repair work. If your dealer cannot supply you, write us direct for prices and full information.

Quick Repair Washer Company

Traction Terminal Building

Indianapolis, Indiana

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the Act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (total disability).....	\$10,000.00
Loss of eye.....	\$ 1,990.00
Loss of hand.....	\$ 2,500.00
Loss of index finger.....	\$ 650.00
Broken leg.....	\$ 200.00

Even though the law does not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us at a very reasonable rate.

Let us assume all your liability. Write us today for application blanks and full particulars.

We are in position to write your fire insurance on machinery. Write for application.

Threshermen's National Insurance Company, Ltd., Mtl.

Commercial Nat'l Bank Bldg. Madison, Wis.
Agents wanted

flour and sugar and other cooking supplies and I had it placed between the work-table and the stove. Then with a good stool, which husband sawed off to a convenient height, I found I could sit at the cabinet, mix a cake, reach over to stir something cooking on the stove, or to place a soiled dish on the table without once getting up. I may as well add right here, that when the kitchen cabinet was delivered, I saw to it that a number of other things came out with the same load; a bread-mixer a food chopper (to replace the bowl and chopping knife that had been handed down to each succeeding bride), a self-basting roaster, a coffee percolator, etc., etc.

But all these things were as a drop in the bucket to the thing I came to realize was needed in that old house—running water and waste pipes. I confess the thought of adding those staggered me, for a time, but I set about sounding the men folks on the subject and received the surprise of my life. Right then and there I learned that there is a challenge in being asked to do a really big thing, when sometimes a request to do a little thing is merely an irritation. Those men began investigating possible force pumps and figuring on where an elevated tank could best be placed and discussing the laying of pipes, until I saw I could safely turn that matter over to them, while I thought about other changes. For by this time I had "got my second wind" of courage and enthusiasm and was eager to see the thing through!

And "see it through we did." You notice I say "we" now, for the men-folk had become so enthusiastic that they fairly "took the bits" between their teeth and, at times, I wondered where this thing would end—this thing that had started in the aid society meeting! Well, it ended by installing a gasoline engine, that not only pumped water into the elevated tank, to be distributed throughout the house, just as water is piped in a city house, but that also connected directly with a dynamo, generating electricity with which the whole place could be lighted! With the furnace for heating, running water, a bath-room, electric lights, it seemed as if everything desirable had been attained. But you would be surprised at the numerous "improvements" we have found it possible to add, since we have the necessary "power" to run them.

First of all was the electric washing machine. For when daughter-in-law came home, with our first grandchild (a son who was given the name his father and grandfather had borne before him) every one of you mothers will know that it took a lot of washing, to keep his little garments dainty and clean. An electric iron naturally followed the washing machine, and there we stopped, for a year. But

this last Christmas, when it came to discussing what we could take the "children" for their Christmas present, I was ready with two suggestions—a vacuum cleaner and a wee motor to drive the sewing-machine. Since the young man of the home was already fast outgrowing the garments his doting grandmother had provided for his first short clothes we decided on the motor. But I am not going to promise that we shall wait until another Christmas rolls 'round, before seeing that the vacuum cleaner is provided.

I have smiled all to myself most of today, over a remark I overheard husband make to a farmer friend who was visiting us in our city home, yesterday. I was hurrying from kitchen to dining room getting the dinner on the table, and husband was telling his friend about the improvements we had added to the old farmhouse, the past year. As I close to the recital, I heard:

"Yes sir; I decided something had got to be done to make life a little easier for the women folks in that old house and I want to tell you right now, that I never spent money that gave me better returns."

"I decided!!" Then and there I knew I had learned how to manage a man. When a woman can get the things she wants and have her husband say *he* was the one who wanted those things—she has attained the acme of wifely tact!

Forgot the Lady's Name

At a dinner in New York an Englishman heard for the first time and, probably after due explanation, was much amused by that "toasted" chestnut:

"Here's to the happiest hours of my life,

"Spent in the arms of another man's wife:

"My mother."

Shortly after his return to England he was present at a banquet, and thought he would get off the New York toast he had considered so clever. At the proper time he rose and said:

"Here's to the happiest hours of my life,

"Spent in the arms of another man's wife:

"Spent in the arms of another man's wife—

"Another man's wife. Excuse me I really can't recall the lady's name, but it doesn't matter."—*Case Eagle*.

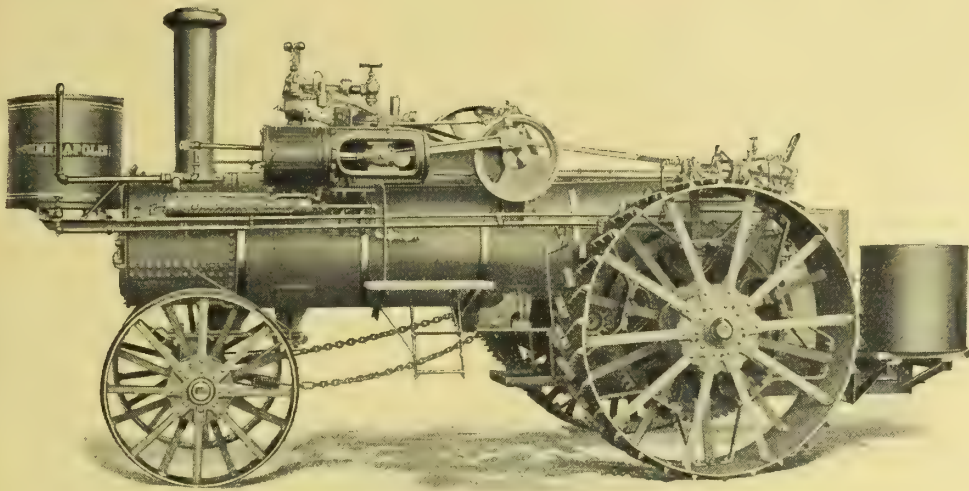
Willing to Forget

"Your speeches were listened to with close attention."

"That's what worries me," replied Senator Sorghum. "Any number of people are liable to remember those speeches and quote them when I am anxious to talk about something else."—*Washington Star*.



"The Great Minneapolis Line"



The Old Reliable Minneapolis Steamer

Minneapolis Steam Engines

are built in three sizes—mounted on boilers built in our own shop and in accordance with A. S. M. E. rules governing construction and inspection.

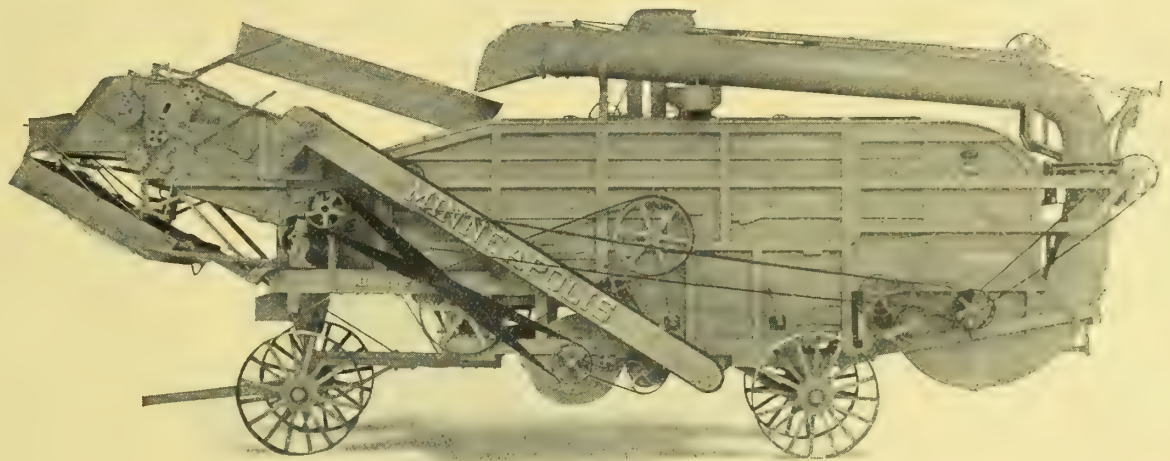
All traction gears are steel or semi-steel, have wide face and are unusually strong and durable.

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has earned and maintained an enviable reputation in the field. For threshing, separating and cleaning all kinds of grain and seeds, it has no superior. It is a wonderful *Rice Thresher* also.

Our catalog tells all about it and is sent free on request. If you mention it, we will also send a thresher's account book—no charge.



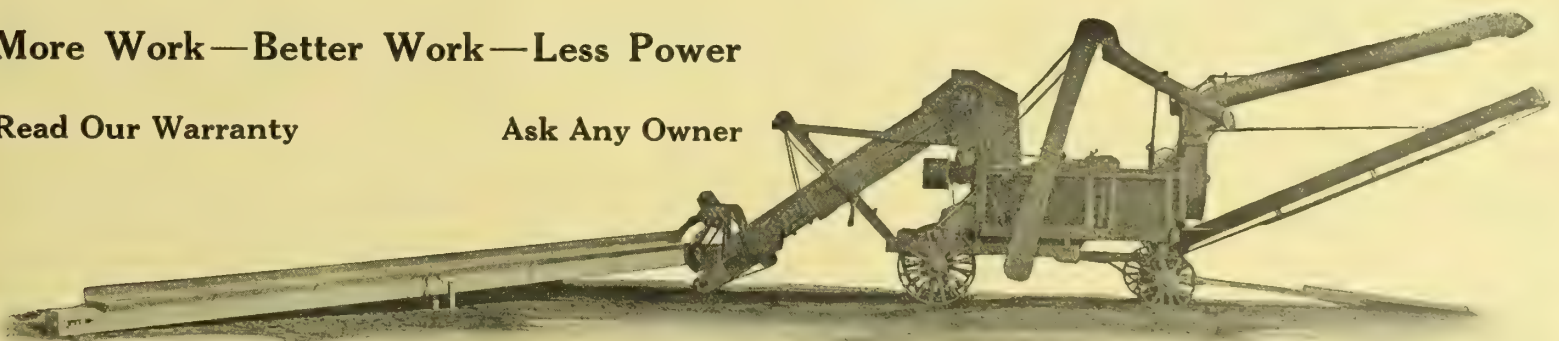
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CLING-SURFACE keeps belts pliable, mellow and water-proof. Gives belts pulley grip without tension or slipping, and makes it possible to run them slack with safety. The belt treated with CLING-SURFACE transmits more power—and lasts longer!

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Winter on the Farm

BY F. H. SWEET

AS the winter days are short, the farmer's work is narrowed down to his chores and such extra labor as his section may furnish; if near the coast, to banking and hauling seaweed as addition to his next season's fertilizers; and, if back in the interior, perhaps to cutting and cording wood for a possible market.

But extra work or not, this is his time of leisure. The long winter evenings are his and many of the rainy days, and the broken spaces between morning chores and evening chores. He becomes more social with his own family and with the neighbors, and gets interested in the periodicals which he overlooked during the long, busy days of spring, summer and autumn. If he is progressive, this question of periodicals is of prime importance. There are new methods and improvements in the agricultural world, of which he should become aware, and perhaps make his; and there are new ideas and new projects with which he should keep himself familiar. In his selection of reading matter, he should include juvenile periodicals for the children, and a judicious admixture of literature and science and fiction to go with his agricultural matter. While he naturally desires his children to become familiar with all that is best in his own calling, he does not wish them to remain ignorant of the outside world of education.

The winter social life of an isolated household is one of the most interesting features of farm life. Each member of the family is dependent on the others. If there is a mutual ability to entertain and be entertained, to amuse and be amused, there will be no question of the willingness of the children to remain at home instead of seeking diversion elsewhere. Between the early supper and the nine o'clock bedtime, there is the long evening to be spent in reading beside the sitting-room table, with stories and anecdotes and puzzles, with nut-cracking and apple-roasting and skylarking in front of the roaring fireplace; perhaps in social gossip with the neighbors, discussions of work and methods, and with candy-pulling and corn-popping. And, sometimes, when amusements pall or the head of the household is in a particularly diligent mood, great baskets of beans or corn are brought in to be shelled by the half-circle which gathers before the fire.

It is a great thing for the farmer to keep his boys and girls contented. If he can bring them to the point of finding their own home more agreeable than the neighboring farm-houses, he will have succeeded.

Nothing should be left undone to bring about this desirable social home-life. If the children show a taste for music, cultivate it; if a taste for reading or collecting, or anything else that will tend to develop them, gratify it. The farmhouse that has two or three girls who can sing and play on the piano, or organ, and perhaps a boy or two who can accompany them vocally, or with a violin or guitar, will inevitably become a central point of attraction for the whole neighborhood. The children will grow up with a certain frankness and refinement which they might otherwise have lacked; and after they have gone out into the world to establish interests of their own, they will look back to the old home with love and tenderness, instead of regarding it as a prison from which they have but too gladly escaped.

This social time of the farmer will give him a better understanding of himself and of his neighbors; and, better than all, of his boys and girls. He will learn of, and begin to feel an interest in their dreams and ambitions. If some of the boys are thinking hopefully of college, or of a profession or trade, he will try to contrive means to further their wishes. And if the girls are looking forward to perfecting their music, or to some of the callings eligible to women, he will do what he can to help them along. It is not always the heart of the grim, uncommunicative man, who is unacquainted with his own children, that is to blame, but rather the unsocial atmosphere in which he has been brought up. He actually does not know how to get acquainted with his own family.

But winter does not wholly belong to the social side of the farmer's life. There are a multitude of small chores and duties and opportunities to occupy his time, and it is only in contrast with the longer hours and larger duties of spring and summer and fall, that winter seems a time of leisure.

All the little odd jobs are rarely caught up with, even on a well-kept farm. During the hurry of cultivation and harvest, wagons and plows and harnesses and hoes are put aside as they give out, to be repaired or discarded, as some leisurely examination in the future may determine. But this examination seldom takes place until the hurry is stopped by the freezing of the ground. This is not the best economy, admittedly; but it is the economy usually practiced. If tools are not cleaned and oiled occasionally as used, and harnesses are not oiled and mended as they get rusty and out of repair, and if disabled wagons are not

taken promptly to the farm blacksmith and repair-shop, the next best thing for the hard-pushed farmer is to attend to them just as soon as he finds it practicable. And this time of convenience usually comes to him only during the partial leisure forced upon him by the frozen ground.

Every farm should have a good tool and repair house, with a judicious selection of paints and parts of harnesses and various tools—saws, chisels, hatchets and hammers—an assortment of nails, spikes, bolts and screws of every kind that may be needed in an emergency to repair any breakage, and duplicates of certain parts of plows, mowing-machines, tedders, and other machinery in use. Then, as the stormy days of winter force the farmer indoors, all these odd jobs of the invalid farm-gear should be attended to, or finally discarded, as may be found best. Often a little oil and paint will make an apparently useless tool almost as serviceable as a new one from the manufacturer, and that will be as good as so much money earned. Often a wagon that has been discarded as valueless can be brought back into the ranks by the addition of a new axle or wheel, or perhaps by even a few new spokes here and there. Many a farm tool and repair house has proved to be the best paying investment on the place.

Late fall or early winter is a good time to clean out the well. The air and water of the farm should be kept pure at whatever cost, and a well should be cleaned out at least once a year. Then there are the pig pens and cow yard and sink drain that probably need looking after, and leakages to be stopped. Use a little dry muck, dust from the coal pit, fine loam or plaster every week or two. It will sweeten the air about the house, and it will store up plant food for another spring, when it is sure to be needed. Feed the root crops to the cows as long as they hold out. The cows like them; and they are good for milk and help to bridge over from green to dry feed.

During late fall and the open days of early winter, it is well to use the plow when possible. Make it a rule, however, to plow on level land. That is about equal to a good coating of manure. The exposure to freezing and thawing not only mellows the soil, but, owing to the absorbent qualities of newly-turned ground, it gets a positive advantage from the atmosphere, and is in much better condition than if it were plowed in the spring; while a well-fed ox or horse can put more strength into the work in the cool, bracing days of early winter than he can in April or May. Besides, it costs less to plow in the fall than in spring.

However, winter occasionally sets in early, and the ground remains frozen from November to April. In

uch case, about the only work the farmer can anticipate is the hauling out of manure to the level fields where it will not waste, the building of new stone walls and fences as needed, the repairing of old ones, the working over of manure, the cleaning up of fields, and the doing of all the little odd jobs which will go toward the forestalling of spring work. Then when the ground opens in April, or it may be in March, he will be able to take advantage of the first thaw.

But perhaps of all the advantages which the leisure of winter gives him the greatest is his renewed hold upon the companionship of his children. During the summer his days were given to work and his nights to rest, so he fell away from them. But now he moves back and once more becomes a member of his own household. The girls come to him with their little concerns, and he enters into them heartily; and the boys talk with him, and freely ask his advice and companionship. He goes tilting with them, and accompanies them to their snares, and even shoulders the old smooth-bore occasionally and joins them in a fox or rabbit hunt. From the half-remembered days of his own boyhood he brings up anecdotes of the animals and birds that he used to catch. The boys listen with shining eyes and bated breath, and when they go home at night they repeat the stories with sundry additions of their own, to the wondering younger brothers and sisters. Then, when the work opens in the spring, they all enter upon it with equal heartiness, with the boys probably feeling as much interest in the farm as their father.

Quite Necessary

"We must have the wedding at two, not four, dearest."
"But Fred, I wished it at four. Why not?"
"Your father is going to give us a check for a wedding present, isn't he?"
"Yes—but what has that to do with it?"
"Why, darling, don't you know that the banks close at three?"

A Bare Fact

Two ladies gay met a boy one day,
His legs were briar scratched;
His clothes were blue, but a nut-brown hue
Marked the place where his pants were patched.
They bubbled with joy at the blue-clad boy
With his spot of nut-brown hue,
Why didn't you patch with a color to match?"
They chuckled, "Why not in blue?"
Come, don't be coy, my blue-brown boy,
Speak out!" and they laughed with glee;
And he blushed rose-red, while he bashfully said:
"That ain't no patch; that's me!"

While agriculture in Italy was not made as productive in 1919 as in the average of pre-war years, yet it was nearly up to the mark in wheat and oats and was about one-fifth below corn, rye, and barley.



SKF
Research Laboratory
established at Philadelphia to co-operate with the Gothenburg Laboratories in the study of the American Manufacturers' friction problems.

THE technical advice brought you by our engineers embodies the experience of highly trained organizations in all parts of the world in the solving of friction problems.

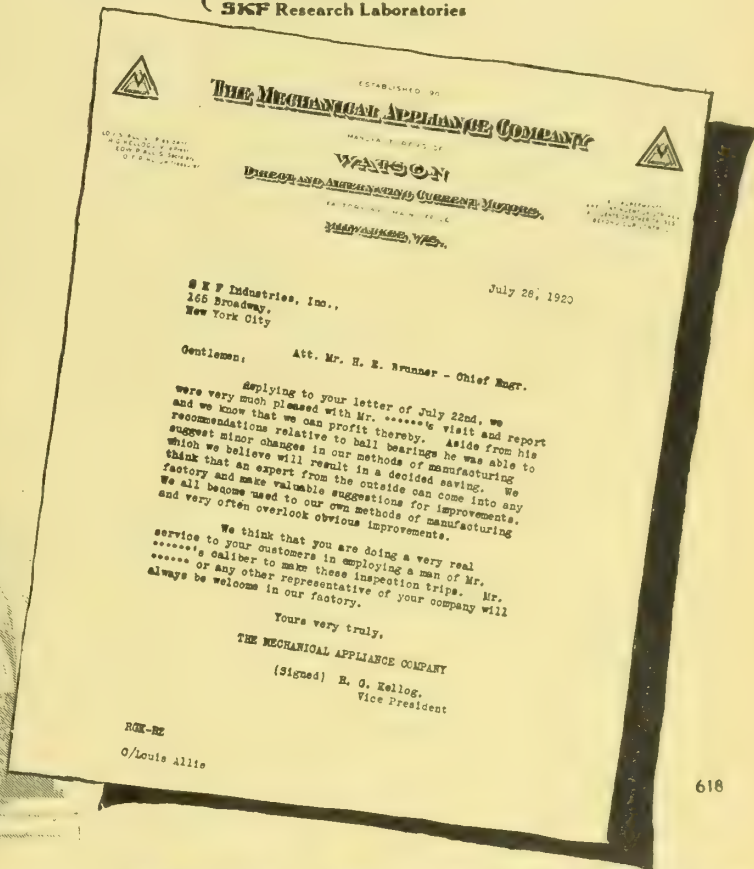
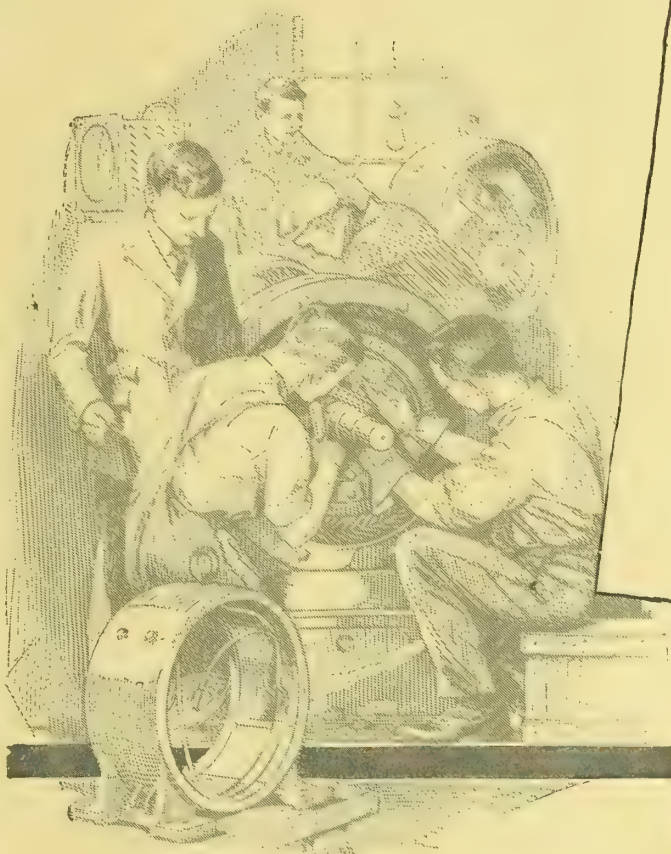
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of the stock-
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Double row self aligning ball bearings. Transmission equipment.

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Liberty Grain Blower

Fan mill and elevator combined, at half the cost of an elevator. Loads into box car, wagon or bin. One man and gasoline engine does the work of three men without shoveling or lifting.

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scours and polishes wheat or oats, making it test higher and bringing a better price. Light, durable, easily moved. Particulars free.

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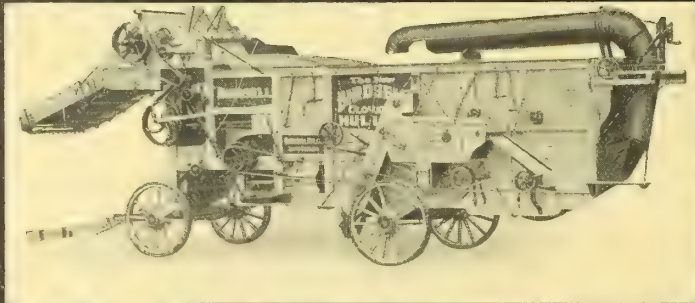
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The Butler Company
Butler, Indiana

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MEN often fail in business because of mistakes in management. Poor buying is the cause. Threshermen who make mistakes by buying poor machinery cut their profits and ruin their chances for success.

Birdsell Hullers Always Satisfy— They Pay Good Returns

You cannot make an error in judgment when you buy a "Birdsell." It always proves a valuable asset. There is less depreciation on a Birdsell Huller than any other piece of machinery made. It is built right and stays right.

Birdsell Mfg. Co.
South Bend, Indiana

A Fuel Saver



Guarantee
The Tubular Arch is warranted to be made of good material, and to stand 200 pounds working pressure.

for Your Steam Engine

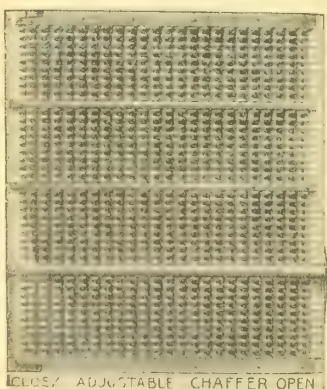
Here's an arch which possesses marked superiority over the conventional brick arch. It gives a greater generating area, provides a roomy fire box, makes an easy steamer, and, contrary to the brick arch, which requires replacing at short intervals, its firmness guarantees absolute stability and long service.

With the Tubular Arch installed in your boiler you can fire with any kind of fuel, straw, wood or coal, and save from 25 to 40% on your fuel bill.

Stop burning up good, hard earned dollars. Investigate these claims.

The Gugisberg Tubular Arch Co., St. Peter, Minn.

The Charles Closz Patent Adjustable Sieves and Chaffers



have gained a world wide reputation for being the very best and only thoroughly reliable separating and cleaning devices for all makes of threshing machines.

They are used very extensively and successfully in all makes of threshers throughout the U. S. and Canada and all foreign countries.

Write for our catalog with price list and any other information you may desire about the use of our sieves and chaffers and mention size and make of your separator.

Charles Closz Co., Inc.
Webster City, Iowa

Uncle Silas

NOT even "Tom and Jerry" belongs to the Old School.

THE man who can successfully sew a button on and cook a good meal is the ideal husband of the woman in politics these days.

DO unto the other fellow as you would that he do unto you, until he proves himself a piker, then wait until he starts something.

THE government does not allow us to carry on lotteries, yet it awards all of its land drawings by lot.

"THE hell of it is," as Ali Baba used to say, that some people persist in dancing while the devil plays the fiddle, and they won't stop until the floor catches fire.

INSTEAD of being permitted to drink the elixir of life from the decanter of Baccus, most of us are forced to the "branch water" of poverty from the barnyard gourd or take long chances of a blinding draught of him who peddles "White Mule" at twelve-fifty a quart.

REMEMBER now thy Creator in the days of thy youth and forget Him not when thou hast grown gray with age, that thy passports may be validated when thou pikest down the gang plank of the old Ship of Zion bound for that unknown harbor from whose bourn no traveler returns without wings.

SORTER let this fact soak in a little, Ezra, that the man who lies about you is not going to get very far unless there is a foundation for him to stand on. The man who tries to injure you by lying about you will himself get the worst of it before long. The thing to do is to live so that a lie will not be believed. Lies can't hurt you very long; it's the truth that cuts the deepest gash and the truth will knock you off your roller skates much sooner than a lie.

IT should be kept in mind that it's the "get up and goers" that are always there at "milking time," not the class of people who are waiting on Congress for an appropriation. There is no record in history of anybody ever getting fed by the ravens excepting Elijah and even in that case the menu was confined to manna, without any sugar or cream on it. You'd find that manna for a steady diet wouldn't be very strengthening, besides even ravens are sometimes rogues and they might strike at waiting on the table for anybody excepting prophets.

THERE'S a lot in the angle from which you look at things. Now, there's Bill Campbell. He is a God-fearing man with a very tender heart and a great believer in Christianity, but Bill believes in following the well beaten path of the materia medica when his tripe needs scraping. Bill got bilious a while back during a visit from a friend who is a Christian Science healer, and who persisted in trying a word of prayer on him. After waiting a day and a night, without visible signs of relief, Bill tackled his family doctor. The good lady, who had gone home in the meantime, telephoned to know how things were coming and Bill reported progress since he had taken three doses of Doctor Fox's celebrated "tripe-scrapers." She indignantly asked, "Do you think Doctor Fox is ahead of the Lord?" "Well," Bill says, "to be painfully exact, when it comes to regulating my bowels I think he's a block ahead of him."

THERE'S a lingering desire on the part of our "hold-up" friends to have these United States go "Mex," and that the man with the biggest gun or the biggest crowd of bandits be entitled to the swag, but they are playing dangerously near to the limit of our human endurance. There was a time when a horse thief out West who got caught knew that it was time to say his prayers, for he either looked up a limb or faced a firing squad just as soon as the crowd who caught him could make the preliminary arrangements, and theirs was the court from which there was no appeal. This sorter cleared the atmosphere after the coyotes had gnawed the bones of the evil doers, and this decision was always reached by the jury in a few minutes.

Unless there is a very decided change of heart among the "stick-em-up-boys," the price of lots in the cemeteries will have to be advanced, for there are enough honest men to help kill off this generation of vipers, and the kuklux klan under modern methods will have to be organized over again if that's all that will put an end to this blight that seems to be settling down like a fog on the American people.



E-B Reeves Threshing Outfit on an Illinois Farm

It Pays to Ask for a Pedigree With Your Implements

THE E-B LINE

Binder Engines	Plows
Corn Binders	Potato Diggers
Cultivators	Potato Planters
Gas Engines	Pump Jacks
Grain Binders	Rakes
Grain Drills	Reapers
Harrows	Ridge Busters
Hay Loaders	Stalk Cutters
Listers	Threshers
Manure Spreaders	Tractors
Motor Cultivators	Tractor Plows
Mowers	Vehicles
Planters	Wagons

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Auburn, N. Y.	Oklahoma City, Okla.
Columbus, Ohio	Omaha, Neb.
Dallas, Texas	Peoria, Ill.
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Kansas City, Mo.	Wichita, Kans.
Minneapolis, Minn.	

Export Office

Grand Central Palace, New York City

A cow goes into the auction ring and brings a five-figure sum. Another, apparently of the same weight, size and breed, brings only market price. Why the difference? One has a pedigree, the other hasn't. Years have been spent in breeding and developing one—its quality is proved. The other is unknown.

Some farm implements go under the hammer at farm sales and bring good prices, even though used. Others, from all outside appearances just as good, bring scrap-iron prices. Why the difference? The first has a known record behind it—a name that has been proved—a pedigree. Years have been spent in perfecting them. The others are unknown.

E-B farm implements are pedigreed. Sixty-nine years have been spent in improving and

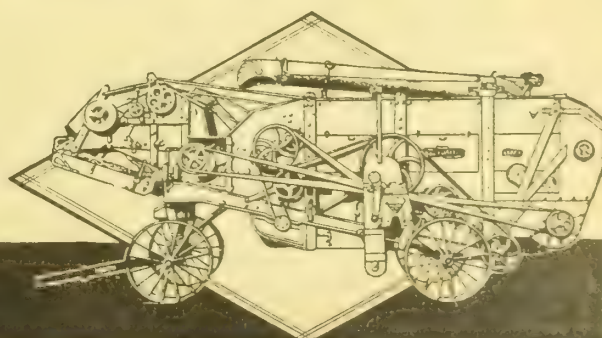
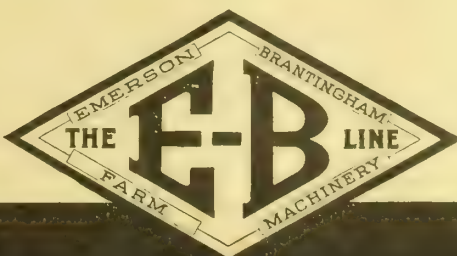
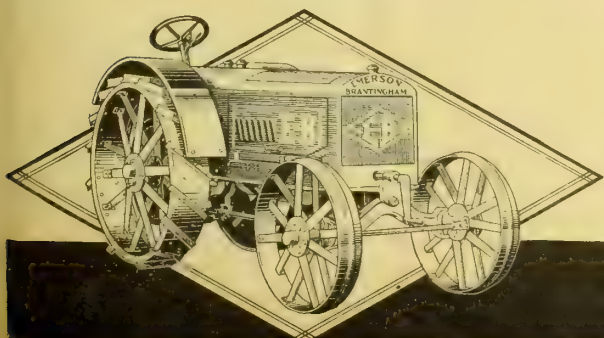
perfecting them. Their quality is known. Whether it be power-drawn or horse-drawn, every tool in the big E-B line is up to the standard—ease of pull and operation, lasting and modern construction.

This is the year to make sure before you buy. Profit will depend greatly on cost of producing—the cost of producing on dependable, time-saving machinery. E-B tools of a known quality cost no more than those of unknown quality.

Emerson-Brantingham Implement Co., Inc.

Established 1852 Rockford, Ill.

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company





This hood uses the blast from the wind stacker to clean the dirt out of the straw. It builds better stacks by allowing the air current to pass through while the fingers drop the long, clean straw on the stack without blast. The straw falls in such a way that a perfect stack is the result. The fingers are made of properly shaped, oil tempered steel and are securely fastened, so the straw is easily dropped. Straw is worth more now than ever before, and it is up to the farmers to save it. Every thresherman who equips his machine to save straw is sure of more profits.

OIL-RIGHT LUBRICATORS

More arms and legs have been torn off and more men killed around the threshing outfit while oiling than in all other kinds of threshing accidents combined. The OIL-RIGHT absolutely prevents these accidents. This oiling system does not merely oil one or two bearings but it may be used to oil the entire machine. As many extra feeds may be used as desired.

We also furnish GRAIN SAVING STACKERS complete at a real saving to you. Write for particulars and price.

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Save Money and Unnecessary Labor

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Its materials are heat resisting and each separate strand carries its own lubricant.

IN TWO FORMS

Let us send free working samples to prove it will outlast other packings.

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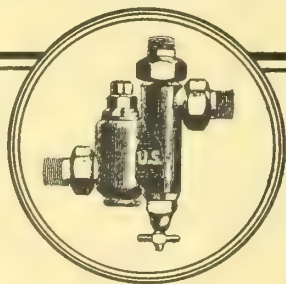
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It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam tractor field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Boys and Girls

If I Knew

If I knew the box where the smiles are kept,
No matter how large the key,
Or strong the bolt, I would try so hard
I'd scatter the smiles to play,
That the children's faces might hold them fast
For many and many a day.

If I knew a box that was large enough
To hold all the frowns I meet,
I would like to gather them, every one,
From nursery, school and street.
Then, folding and holding, I'd pack them in,
And, turning the monster key,
I'd hire a giant to drop the box
To the depths of the deep, deep sea.
—Selected.

A Rooster Who Wouldn't Mind His Mother

BY TROY WILSON LEWIS

"Everywhere you see a hen scratch,
There you'll find a bug, I bound you."

Once upon a time an old speckled hen was clucking and scratching among the flowers and shrubbery of the back yard in search for golden bugs and little reddish worms. It was breakfast time and she had her family to feed. Her children, nine prim little partridge-like chickens, were running hither and thither around her, chirping gleefully among themselves and occasionally in sportive banter pecking each other's precise little tail feathers. Every time the old mother hen turned up a bug or worm she would "cluck," "cluck," to her children, and they would rush with startled eyes and hungry craws to witness and devour the new discovery. The family was happy. It was a beautiful spring morning and there was no thought of sorrow among them.

One of the little chicks thought that it would be smart for him to try his wings and show off before his brothers and sisters. He called unto them to witness the splendid skill he had acquired in the use of his speckled young wings. He flapped them a moment in the warm sunshine, then hopped upon the old curbing which enclosed an open well near the back of the yard. He frantically flapped his giddy wings for a moment, while trying to balance himself on the curb, then toppled over into the well and was drowned. The old hen, his mother, and his startled brothers and sisters, suffered much from sadness all that day and the next.

And the next day the old hen met a very fine young rooster who was crowing and strutting among the lady-like hens there in the farm yard, taking great delight in showing off his fine plumage and keen thorn-like spurs to good advantage and for the plaudits of the court ladies assembled. Now this young rooster was also a son of the old hen, for he had been hatched out the year before and had grown up to comeliness with the other fowls of the place.

"My son," said his mother to him,

"with all your learning I am sure that you have not grown beyond a mother's care and advice. It makes me happy to see that you are strong vigorous and bold. I often hear from the other barnyard folk that you are victorious in battle with your spurs, so that I am not uneasy concerning your engagements with your fellows. but I want to caution you with fear and trembling against yonder well. Do not ever go near it. That fatal spot is sure destruction to our race. Remember this all the days of your life, and do not go near the well. If you will but remember this advice, and go not nigh, then the gods will surely preserve you."

Now the young rooster thanked his mother for her good advice, and determined at once that he would heed her words all the days of his life, but day by day his mind wandered away from her good counsel, and his bosom began to burn within him with rebellion and a longing to disobey. Every time he saw the old well he scorned in his heart the grave advice of his mother, feeling that it would belittle him in the eyes of his playmates to obey the words of the old hen. He longed to look down into the open well for himself, so that day by day he would draw nearer to it with that purpose in view.

"What is this idle charge, anyhow?" he kept repeating to himself. "Let my bold courage her frightful fears dispel. Doubtless she thought that I was a coward and for this reason enjoined upon me to go not nigh the well. Or possibly she has some treasure hidden there which she hopes to with-hold from me, saving the whole of it for herself, and would thus my search and discovery prevent. At any rate I am convinced that she has been giving me very poor advice and that which I shall no longer heed. I am going to look down into that old well."

After making this bold declaration to disobey his mother, the young rooster flew upon the open well curbing and gazed down into the cold and still waters far below. He stretched forth his neck to get a better view and from the glossy surface down in the bottom of the well stretched forth the head and neck of an advancing foe. With fury he ruffled his brilliant plumes and prepared for a fight; likewise did his foe, in the silent reflection, ruffle his plumes and make show of fight. For a moment each threatened the other with bantering, dare, and fencer's skill, until the young rooster was wild with mingled rage and contempt. Summing up all his courage he flew headlong into the face of his enemy, only to find himself in a

death-trap and slowly drowning in the icy waters.

And as the agonies of slow approaching death crept over him he said, "Alas, I would not have been in this sad condition had I obeyed the good counsel of my dear old mother."

From Our Boys and Girls

DEAR AUNT JANE:

I am sending you a picture of myself and my dog Teddy. I am an orphan, don't even have a brother or sister. I live with my only aunt. I am six years old. I go to school in Middletown and have two miles to go. My Uncle Eddie Shafer takes The American Thresherman and Farm Power and has taken it for years. I wish you would put Teddy's and my picture on the Children's Page. I always ask to see that page.



Edwin and His Dog.

Teddy is a faithful dog. He drives the cows, and he and I spend many happy hours playing together.

Your nephew,

EDWIN A. BOYER.

Middletown, Ind.

P. S.—I am too little to write a letter so my aunt wrote for me. E. A. B.

DEAR AUNT JANE:

I am a little boy eight years old. I live on a farm. I go to school and I am in the second grade. My teacher's name is Miss Rutlege. We all like her very much. My father takes The American Thresherman and Farm Power. He has a Case engine and an Aultman-Taylor separator. I have two brothers younger than myself and one sister. My brothers' names are Marshall and James and my sister's name is Hothe Grace. For pets I have a dog, a cat and a pantam. The dog's name is Bob. The cat is named Nigger and the pantam, Mary. We have two mules and four horses and one cow and half. We live four miles from town. I will close for this time and I will write more next time.

ELSWORTH WICKS.

Gifford, Idaho.

(I am looking for your next letter, Elsworth.—AUNT JANE.)

DEAR AUNT JANE:

May I be one of your happy writers? I am a little girl ten years old and I am in the fifth grade. My father takes The American Thresherman and Farm Power. Whenever we get it I always look at the Children's Page first. My father owns a farm of two hundred acres. For pets I have two cats named Pussy and Blackie, three dogs named Shep, Tip and Dash, and a chicken named Tickee. I would like to water the horses and milk the cows, but that is no work for a girl. I like animals as well as people, such as horses, cows, pigs, colts, calves, dogs, cats, chickens and roosters. I have wished for a pony for years, and would like to have one. I haven't seen any letters from Prairie Du Chien.

Yours truly,

HAZEL WETZEL.

Prairie du Chien, Wis.

(I am proud of your good record at school, Hazel.—AUNT JANE.)

DEAR AUNT JANE:

I have not seen any letter from here so I thought I would write. I am a little girl ten years old and at school I am in the fifth grade. My teacher's name is Miss Zimmerman. My papa has a threshing outfit. I have two brothers and one sister. My brothers are named Kenneth and Harry. My sister is named Elsa. Kenneth and Elsa go to school but Harry does not. We have about a mile to go to school. There are nine children in our school. We have a Buick car and an International truck. My letter is getting long so I will stop and hope to see my letter in print for I want to surprise my papa.

Your niece,

HELEN KLASSY.

Monticello, Wis.

(Now you can surprise Papa, Helen.—AUNT JANE.)

DEAR AUNT JANE:

I am a little Center Point boy of nine years. My birthday is the twenty-first of May. I go to school. My father has an Avery and a Rumely threshing machine. I have six little pigs and one old one. I have a pet coon named Duck. I have two sisters and two brothers. Their names are Harold, Elma, Louise and Lewis. Louise and Lewis are twins. They were four years old last February. My grandpa lives in town. We have an eighty acre farm. I am sending you my picture.

Your nephew,

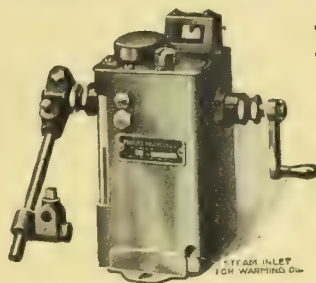
ARNOLD C. HAND.

Center Point, Ia.

(Can you not send us a picture of the twins for our page?—AUNT JANE.)

Peace in Ireland now waits upon the man who can show both sides a graceful way to let loose.—Tacoma Ledger.

An Oil Pump That is Different



Different from any you have ever used—different in design and in construction—different in operation—different in economy.

The "Manzel" Sight Feed Oil Pump Piston Valve Type—Model "XD"

Has no small ball valves, checks or delicate springs, yet it's not a valveless oiler. It's built on the Piston Valve principle, is exceedingly simple in design and construction and absolutely positive in operation.

No working parts on the outside—everything is inside of the reservoir working in the oil continually. It's neat in appearance, convenient to operate, easy to keep clean, and will last longer than your engine.

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If you are not satisfied after 30 days, that it is the oil pump you have been looking for, send it back at our expense.

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And our Big Catalog, all for 20 cts. Big Catalog, free. All flower and vegetable seeds, bulbs, plants and new berries. We grow the finest Gladioli, Dahlias, Camas, Irises, Peonies, Perennials, Shrubs, Vines, etc. All prize strains—many sterling novelties.

JOHN LEWIS CHILDS, Inc. Floral Park, N. Y.



Smooth Potatoes

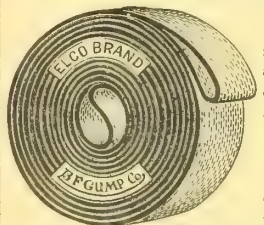
assured to every farmer if he will first rid his seed potatoes of infection by using:

FORMALDEHYDE
The Farmer's Friend

The official standard seed cleanser. Gives increased yield of from 30% to 40%. Potato scab and black-leg once in the ground may persist for many years. U. S. Dep't of Agriculture recommends cleansing all seeds with *Formaldehyde* solution to prevent the spread of potato diseases. Also positively destroys smuts of grain and fungus growths. One pint of our *Formaldehyde* from your dealer treats 40 bushels of seed. New illustrated book sent free on request.

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All belts are guaranteed. Only a limited amount of belts on hand at these prices.

ORDER NOW

10 per cent discount for cash with orders.

4-PLY

Number on Hand	Length Feet	Width Inches	Price Each
10	50	6	\$22.80
14	75	6	33.20
9	100	6	44.00
6	50	7	26.00
6	75	7	38.00
10	100	7	50.00
11	125	7	62.00
4	150	7	74.00
12	100	8	56.40
15	125	8	70.00
15	150	8	83.20

5-PLY

Number on Hand	Length Feet	Width Inches	Price Each
4	125	7	\$76.60
2	150	7	92.40
3	150	8	104.40
3	150	9	114.80

All sizes of thresher belts furnished. Write for our prices on other sizes and for our thresher catalog

B.F.GUMP & CO.

Established 1872 Incorporated 1901
431-439 So. Clinton St. CHICAGO, ILL.

Circular Corn Crib of Tile

(Continued from page 10.)

these being spaced around the building. These spouts were reached from the outside by means of ladders when it was desired to draw off the contents of the bin. Where outside elevating machinery was used in filling, an opening was provided either in the roof or high up on the wall just under the eaves. One crib, equipped with permanent elevating machinery, was provided also with several window openings covered with iron shutters and set about four feet above the floor of the crib. These, the owner stated, were found useful when the crib was nearly empty and it was desired to shovel out a few wagon loads of corn without going to the trouble of operating the machinery.

4. Protection against rats and mice.

With a good concrete floor it is comparatively easy to make cribs of this kind proof against rats by fitting a strip of small-mesh wire around the walls at the base. A strip five or six feet high is ample. It is somewhat of a sad commentary, however, upon the indifference of corn belt farmers to the thievery of corn by rats and mice, to state that of the numerous cribs which we examined only one was found to be protected in this way. Just what the mental process may be which impels a man to go to the expense of constructing a crib of this kind with its splendid possibilities of storing corn in such way that it shall be safe against every possible harm and then leave it unprotected in this way would be difficult to fathom. The cost of this additional equipment is so small as to be considered nil in the total cost of the building.

5. Cost.

It was not possible in many instances to determine the cost of these various cribs. Such figures as might have been obtained would be apt to be misleading in these days of constantly rising costs. However, by way of example, it may be stated that one crib, housing fifty-five hundred bushels of corn and containing no provision for grain, cost \$1,600 when built in 1917. This did not include the labor which, with the exception of the foundation work, was done mostly by the owner and his regular help. It will be noticed that this represents a cost of about thirty cents a bushel for its storage capacity is considered. It should be held in mind, however, that no matter what the cost might be the initial expense represents about the entire cost unless it be for re-roofing some day in the future. Of all the cribs we saw none was equipped with anything save a shingle roof. One owner stated that if he were building again he would put on a metal roof and keep it well painted. In such a case

that cost of upkeep would be practically nothing.

We were impressed with the permanence of this type of crib and its effectiveness in the way of storage of corn without deterioration. In no instance did we hear any complaint of mouldy corn and we do not believe there would be any. There is certainly abundant ventilation and,

A Modern Pioneer

(Continued from page 8.)

had four hundred acres of sodland to be broken for crops, and he gave his tractor a real test before he got the job finished.

The farmer who can telephone to town for a tractor, have it delivered at his door, call for a service man the minute something goes wrong—such a farmer deserves credit for keeping abreast of the times, but he shows no particular courage in providing himself with motorized equipment; but when a farm homesteader travels over four hundred miles to buy his equipment, then trusts to his endurance to get it home, and to his ingenuity to keep it in good shape after arrival—he's a real man, that's sure.

Some observers have pointed out that the great difference between agricultural workers of Europe and of the United States (so noticeable to persons who have traveled widely in the farming sections of the two continents) is the difference between hand work and machine work. This country is the world's largest producer of farm machinery because the farmers of this country have the courage, ability and progressiveness

when the slant tile spoken of are used, but little chance for the elements to work their way into the interior. One man stated that his corn was pretty soft the season before when he placed it in the crib but that it cured out in splendid fashion. With protection against fire, rats and moisture so well provided and with corn the staple crop on so many farms it will be surprising, in case corn prices remain high if many of these cribs are not built in the next few years.

to take advantage of farm machine improvements and will buy them.

Farmers, nearly always, buy new types of machines first because these machines lighten farm labor. The economies of operating expense are almost always secondary. They have been doing this for several generations now, and the effects of this practice are shown in the farm people themselves. In the French village you don't hear strangers exclaim "What a fine-looking old lady!" or "What a smart-looking old boy that farmer is!" For the back-breaking mind-dulling toil under which the European peasants must struggle takes youth from them in their young years. Their minds are not grappling daily with machine problems, combined with financial problems growing out of their machine farmed lands. They have no daily market quotations to study, no well lighted, new farm houses in which to read the daily news.

Machinery costs a lot, these days but, combined with its effect on farm life, it is worth all it costs. Men like Henry are living testimony that it is

Making Minnesota Farms

(Continued from page 9.)

to indicate that we were in the rolling lake country of southern Minnesota. The sun beat down hotly on a stubby, shadeless field, and as far as we could see, through the dusty haze, the big track-layers were bucking the boggy sod.

They were mostly about 30-60 horse power machines, drawing six plows each. Using ten-inch plows and turning over virgin sod (old bog land at that) these tractors were getting a speed of over two miles an hour.

At a rough guess, I would say a forty-acre field had been plowed since morning. The tractors were behaving badly on this particular day, one operator told me; and his helper, who worked the plow levers, was making frequent trips for water. Only six tractors were working on the field, and not more than three were in motion at the same time.

One tractor driver told me his machine averaged over an acre of

land plowed per hour, including turns and stops. He had also spent some time thinking about costs. By adding the fuel and oil costs, the interest charge on present prices for these tractors, the wages of two men plus their food (furnished by the company) he had estimated that plowing costs were in the neighborhood of two dollars an acre.

Later, I checked his estimate against that of a company which manufactures a track-laying tractor.

This company recommends that a tractor of this type use six ten-inch plows, when plowing to a depth of six inches, at a speed of two miles per hour. Working under these conditions, the tractor will plow one and a quarter acres per hour.

Another company made acreage cost estimates for the same size of tractor under similar conditions. It allowed sixty cents for fuel, oil depreciation and interest per acre doubtless the tractor was carefully

handed. As this test was made some months ago, the increased fuel costs would, combined with the wages, bring the total plowing cost to the figure that the Minnesota operator gave me.

No matter what the cost, these tractors do the work, and it is doubtful if anything else ever could have made plowed fields out of this swamp.

Not all the ground is freshly plowed. In 1919, some great crops were raised on the old lake bed. Take wax, for instance.

Last year twenty-two hundred acres of flax were planted on the farm. The new soil produced twenty bushels per acre, and the flax sold for over seven dollars a bushel. This means that the farms produced one crop with a gross income of over \$300,000. When one farm is putting \$1,000 worth of tile into the ground each working day, it has to get big money from some crop. The flax came across."

Great haystacks dotted the field where the tractors were plowing. I was unable to get an estimate on the hay crop, but the acreage of hay must have exceeded that of flax. With hay prices aviating the way they were, last winter and spring, the hay money must have helped a lot to balance the expense of reclaiming the land.

The farms are just hitting their stride on grain production. About three hundred acres of oats were raised, and the yield was not particularly heavy. No doubt a great deal of these oats will be feed.

At any rate, these farms will hold their oats. A number of portable, sheet-metal granaries have been bought. In size they are about fifteen feet in diameter, ten feet high, with a ventilator at the top. These little cone-shaped houses are solving the storage problem in lots of sections where farmers have been unable to get freight cars or elevator room.

The individual methods of the Albert Lea Farms were not so interesting to me as an editor, as the general perspective. Anyone can see the various phases of truck, tractor and ditcher work in most agricultural sections; but these men are pioneers! Here is an organization that is combining modern farm power equipment to do somewhat the same work that the Mormons did in Utah, with ox-teams, shovels and picks. It is the history of our great West being repeated in the present.

Trucks and tractors are but larger types of the gasoline engine which has enabled enterprises such as the Albert Lea Farms to overcome difficulties that seemed unsurmountable to our forefathers.

Today these projects not only succeed; they pay a profit. In this lies the motive that urges men to reclaim land that Nature intended for swamp or desert.

How many cords of wood per day?



TEXACO TRACTOL

in the tractor makes a
good deal of difference
in that figure—

TEXACO Motor Oil

The uniform oil that keeps your motor active. It is a fine lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.

TEXACO TRACTOL makes the difference between having *all* the power developed by the engine transmitted to the belt because bearing surfaces are properly lubricated, and losing a large part of the power transmitted because friction has become so great a factor.

Texaco Tractol is a special lubricating oil made just for the kind of work your tractor does—heavy load, with engine running full speed for long periods at a time.

Texaco Tractol is sold in 33 and 55 gallon steel drums, in wooden barrels and half-barrels, and 5 gallon sealed cans. Your dealer can tell you what grade of oil your tractor needs.

When you buy oil for your automobile, truck, harvester, thresher, electric light plant or any other use, remember the name Texaco. Under the red Star and green T brand you will find the right lubricant for every purpose.

THE TEXAS COMPANY

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CYCLONE SAW MILL BLOWERS

Ready to install on any make of mill. Will carry all sawdust anywhere from 25 to 100 feet. Save the time and labor cost of constant shoveling. They pay for themselves many times over in the course of a year. Simple to install and fully guaranteed. Operated with $\frac{1}{2}$ to $1\frac{1}{2}$ H. P.

Write immediately for circular and prices.

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IRRIGATE Your Field and Garden

Get larger yields and profits. Provide fire protection for your buildings, and water for your stock, by installing an

'AMERICAN' Centrifugal Pump

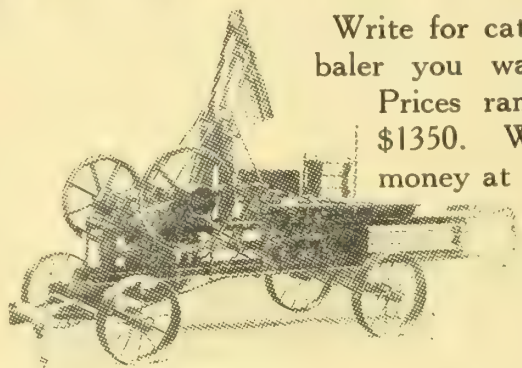
A compact dependable, and economical pump that requires little attention. A size for every purpose—small farm or large irrigation project. Absolutely guaranteed.

An American Centrifugal Pump insures all the water you want when you want it. Write for new Catalog.

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Study at Home! Learn Gas Tractor Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address Clarke School of Traction Engineering, Madison, Wis.

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Write for catalog, giving size of baler you want, new or used. Prices range from \$175 to \$1350. We can save you money at this time.

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Machinery Co.
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LUNKENHEIMER
STEAM TRACTION ENGINE
APPLIANCES
THE LUNKENHEIMER CO.
CINCINNATI

WRITE FOR CATALOGUE J-5

Mr. Thresherman! How About It? Are You Going to Equip Your Rig with a

Buller Automatic Coupler

This Spring, or are you going to continue wasting your valuable time and money with the old and tedious method?

Why not order a Buller on 10 days' trial? If you then think it is not worth the price you paid, you may return it at our expense and your money will be refunded. We have sold thousands of couplers on these terms and we know of none that have been returned after the 10 days.



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Besides, the coupler offers thorough protection against accidents because of its positive automatic feature. For a quick and safe getaway, there's nothing that equals the BULLER.

Make up your mind today.

To connect up with your separator is only a matter of a moment's time

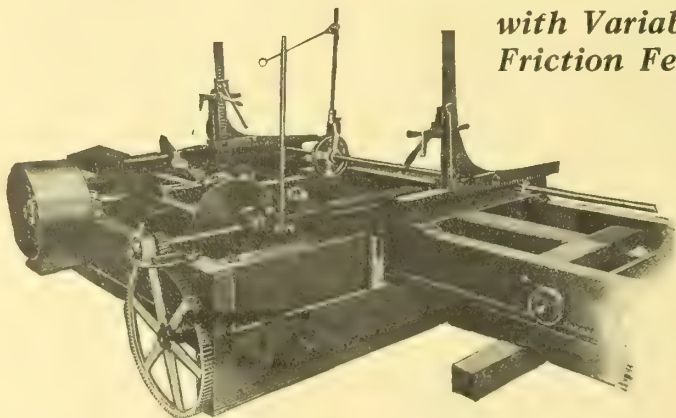
Drop us a postal for our catalog showing the different types.

BULLER COUPLER CO.

HILLSBORO, KANS.

Dixie "G" Saw Mill

with Variable Friction Feed



America's Most Popular Small Saw Mill

— Thousands in Use —

CAPACITY: 2,000 to 10,000 feet per day with 8 to 20 H. P. Steam, or 12 to 30 H. P. Gas, Kerosene or Tractor Engine.

HILL-CURTIS COMPANY

1504 North Pitcher Street

Kalamazoo, Mich.

Organization Notes

(Continued from page 20.)

by Chester Kirk furnished variety to the speaking program. Rev. C. G. Jordan, a farmer thresherman member of the state legislature, was introduced, and he assured the threshermen of his hearty support. He made a good point in urging tact rather than aggressiveness in approaching legislators about bills. Following his speech, John A. McSparran, president of the State Grange, made a plea for attractive home life on the farms of the state.

At the Friday morning meeting, Albert Allen, of the Pennsylvania Threshermen's and Farmers' Casualty Insurance Company, gave a summary of the growth of his company.

Total income to December 31, 1920.....	\$70,048.67
Total expenditures to December 31, 1920.....	44,709.63
Surplus.....	\$25,339.04

It had been voted to declare a ten per cent dividend to stockholders. This amount is included in total expenditures.

The work of Mr. Allen's company was complimented by E. H. Downey, of the State Insurance Department.

J. A. Rose, secretary-treasurer, then presented his association's financial report.

Balance on hand, February 1, 1920, and receipts since that date to December 31, 1920..	\$6,124.05
Total disbursements for same period.....	5,269.07

Balance, December 31, 1920.. \$ 854.98

A large portion of expense items was in connection with the organization of the insurance company.

The financial statement of the insurance company was presented by Mr. Rose. These figures may be found under Mr. Allen's summary. Reports of auditors showed both reports to be correct, and they were approved by the convention.

The report of the nominating committee was then received. On hearing its selection of officers, a motion was unanimously adopted ordering the president to cast a ballot for all officers, both of the association and of the insurance company.

These officers were accordingly declared elected as Association officials: H. S. Lee, Burgettstown, president; S. V. Kepple, Greensburg, vice president; J. A. Rose, Harrisburg, secretary-treasurer.

An executive committee of twenty representative members was also elected by the same motion.

At the afternoon session, the association went on record as follows: Thanks extended to all speakers. Favoring compensation insurance. Opposing cleat legislation. Opposing daylight saving plan. Favoring better cleaning and grading of grain.

Favoring an appropriation of state

funds to provide for the display and demonstration of farm power machinery at the state college.

J. B. Parker then administered the oath of office to the new officers, after which Mrs. H. L. Lee, wife of the president, sang two solos. Needless to say, the threshermen were delighted to hear the "better half." Representatives of the Case, Frick, Emerson-Brantingham, and Penn Oil Companies made short talks, as well as H. P. Kellogg of New York.

The closing meetings of the convention were featured by speeches from Prof. E. K. Hibshman, State College; Miss C. G. Titzel, a Mechanicsburg woman who has made a success in the supply business. K. Stephens, Pittsburg; Mr. Hodges Rochester, who represented the New York brotherhood, and N. C. Rose Dover, Delaware.

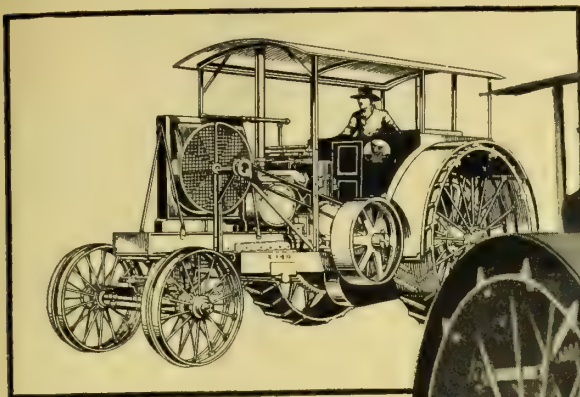
The day following adjournment was devoted to attending the machinery exhibits, made available by the courtesy of the Harrisburg branch houses.

From all reports reaching us, here in Wisconsin, the Pennsylvania convention was "chock-full" of interest to the four hundred brothers who attended.

The New York Brotherhood of Threshermen closed their fifteenth annual convention at Rochester with a good attendance and far greater interest shown than at any previous gathering in the state.

The convention was called to order by President Slocum promptly at two o'clock Monday, January 24 and after a musical selection, the report of the secretary-treasurer M. T. Small, was listened to with interest and unanimously adopted, showing a balance in the treasury that the members are justly proud of. The report of the legislative committee by Chairman H. P. Kellogg was listened to with an unusual amount of interest on account of the adverse highway legislation now pending. We believe the New York Organization will be ready when the time comes to do its part in opposing this unjust measure. D. Ray Higgins, secretary of the Indiana Liberty Mutual Insurance Company, gave an interesting talk on their progress and reports that they expect to gain admission to New York state very shortly and will be in a position to take care of our compensation insurance.

In the evening, W. H. Newsom, president of the National Association, went into the details of the proposed Uniform Vehicle Law, explaining its meaning in a very clear and concise manner, leaving no one in doubt of its probable effect upon our industry. Following this, J. B.



1842
1921

Russell Machines are Pedigreed

Like blooded farm stock, they are the result of painstaking selection and steady improvement over many years.

Russell Threshers combine 79 years of constant try-out and development in actual service.

Russell Tractors, first made in 1875, years ahead of any other, are still First in Reliability, and years ahead in proven service.

READ HOW THE RUSSELL IS SERVING OTHERS

"I purchased my Russell Giant from you second hand in 1914. I don't know how long it had been used when I got it, but it is just as good as ever and runs fine. I have only spent an average of \$20.20 per year for repairs and have certainly had good results. Have had the very best success burning kerosene." W. G. HARTUNG, Newport, Minn.

"Our Russell Thresher was purchased by James Reese and George Greer from The Russell & Co. way back in 1866. It did the threshing for the whole neighborhood up to 1870, then was sold to Chandler Bros. and still remains with the undamaged. It has done more or less work every year and is today doing good work." J. L. and FRANK CHANDLER, Lisbon, Ohio.

"I bought my 12-24 Russell Tractor in 1917 and have used it more in four seasons than most people do in ten. It pulls three 14-inch Oliver plows in Buffalo sod, black land, very satisfactorily and will pull three 14-inch plows in old ground almost any depth. In seeding time I pulled two 14-hole drills, two 8-ft. discs, two-row lister, 12-ft. header and barge, also pulled my two-row cultivator in corn plowing time. I have cultivated and listed corn very successfully and cut 20 acres of wheat with header and one barge on 10 gals. kerosene, and threshed 150 bushels kafir corn with 1½ gals. kerosene. I have farmed 500 acres for the past 3 years and have sold all my horses and farm these 500 acres with my tractor. I find it to be about 60% cheaper than using horses." F. IVAN TINSLEY, Canton, Kansas.

"Am sending you a picture of my old Russell Engine No. 3404 which was built back in 1886. It has been used ever since and is still doing good work for me every season. It has plenty of power and my repair bills have been very small, considering the length of service with this outfit. I do not suppose you have many operators who have used an engine much longer than I have." JOHN VOGEL, New Sheffield, Pa.

"Last summer I bought a 12-24 Russell Tractor and have been operating it in extremely difficult soil. It pulls a three-bottom 14-inch mold board plow six inches deep with ease. In ten hours' hard work I burned about 20 gallons of kerosene. I keep a 30-H. P. dynamo going with it night after night with ease. I use my tractor moving houses, barns and other buildings and it is the most powerful and dependable little tractor I ever used and has not cost one cent for repairs. I am so well satisfied with it that my horses and mules are for sale as this tractor does all my work." FRANK A. BARROWS, Hooker, Okla.

"Ten years ago I purchased a Russell 36x60 thresher and can prove that it has threshed more grain than any one machine of any other make in this country and will run just as good as new. I have heard several of my old customers make the above statement several times. Last year I bought a Russell Giant Tractor and use it with my thresher on all kinds of seeds, and also use my tractor in pulling two 10-ft. La Crosse discs and two 16-hole drills; and I double disc and seeded 88 acres in 14 hours. I would rather run it than 30 horses. It is easy to get started, handy about belting up to thresh, has a good oiling system and runs cool at all times under all loads. I threshed 1400 bushels of wheat in 5 hours; and I moved 3½ miles, set 8 times and threshed 1700 bushels in 9 hours in headed grain." ANDREW E. YALE, Grinnell, Kansas.

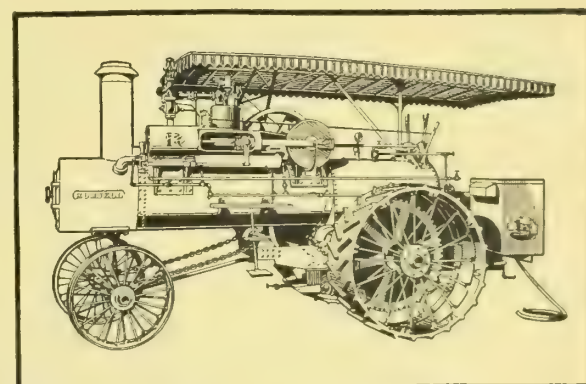
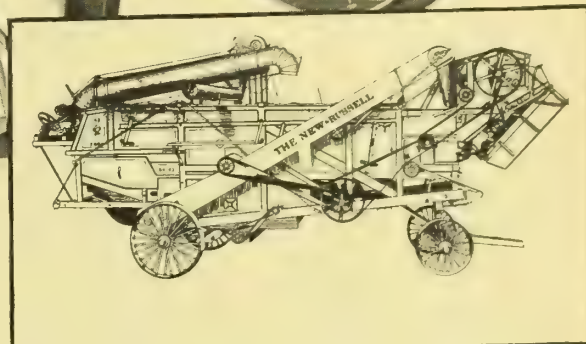
"I purchased your 15-30 tractor and 24x43 thresher in 1920. I have pulled three 14-inch plows in alfalfa and bluegrass sod and four 14-inch plows in stubble land from 6 to 9 inches deep. While threshing we made a run of 600 bushels oats in 2 and one-fourth hours, and hulled 35 bushels clover in one-half day. After we had threshed for 15 days my son plowed our wheat ground with the tractor and finished it much sooner than our neighbors, although we have about twice their acreage." C. F. MELLEBRUCH, Fairview, Kansas.

YOU CAN GET THE SAME SERVICE BY USING THE SAME MACHINES

THE RUSSELL & COMPANY

MASSILLON, OHIO

BRANCHES:—THE RUSSELL & CO., Peoria and Indianapolis; THE A. H. AVERILL MCHY. CO., Portland, Spokane, San Jose, Great Falls, Mont.; THE CLARK IMPLEMENT CO., Council Bluffs, Ia.; GEO. RICHARDSON MCH. CO., St. Joseph, Mo., Wichita, Kans.; F. P. HARBAUGH CO., Minneapolis; THE MASSILLON ENGINE AND THRESHER CO., Chattanooga, Stuttgart, Ark., Crowley, La.; THE ARBUCKLE-RYAN CO., Toledo, O., Goshen, Ind.; LINDSAY BROS. Milwaukee.

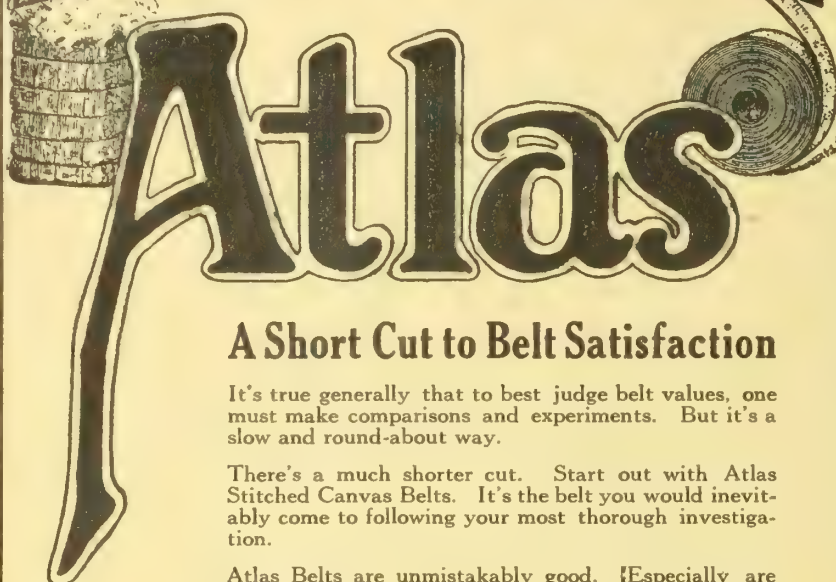


RUSSELL

THE OLD RELIABLE LINE



FROM THE **BALE** TO THE **BELT**
In the ACME Plant



Atlas

A Short Cut to Belt Satisfaction

It's true generally that to best judge belt values, one must make comparisons and experiments. But it's a slow and round-about way.

There's a much shorter cut. Start out with Atlas Stitched Canvas Belts. It's the belt you would inevitably come to following your most thorough investigation.

Atlas Belts are unmistakably good. Especially are they good for farm work, because they're built to withstand exposure and abuse. They're strong, pliable, long-lived, and consequently economical.

Order Atlas the next time. Direct from us or through your dealer.

ACME BELTING COMPANY
Manufacturers
NILES - MICHIGAN

FARM BELTS

Mention The American Thresherman and Farm Power

A Special Offer for 60 Days

A section of land (640 acres) in Taylor County, Wisconsin. All sloping to the south, rich clay loam, running water all the year, woven wire fence with barbed wire on top, 100 acres easily put in cultivation. Pasture alone will pay interest and taxes. \$5,000 to \$10,000 worth of pulp wood, now bringing \$8 a cord at side track, and fencing posts and cross ties, besides an abundance of wood. Ten miles from county seat, gravel road most of way. Rural free delivery right by the tract. School house on corner of section. Will raise all kinds of grain, and best of pasture lands, enough for 250 to 500 head of stock. Price \$50 an acre.

If purchaser will pay as much as \$5000 down, I will buy at market price all the pulp wood, fence posts and fire wood delivered at county seat and credit same on purchase price of property. Can give immediate possession.

This special offer is made for the purpose of finding a customer before spring opens, and no other terms will apply. Every acre will be worth more than double cost price when put in cultivation. Good shack on property for use while improving land.

Address

B. B. CLARKE, Madison, Wisconsin

This offer expires April 10, 1921.

Parker, of The American Thresherman and Farm Power, gave one of his usual enthusiastic talks on organization. Mr. Parker is several years older than he was when he first assisted us in our work in this state, but he has lost none of his pep and in action is as young as any of the boys. The necessary committees reported at this time. The afternoon and evening sessions were interspersed with some violin and vocal solos by King E. Kellogg, assisted by Henry Ewell on the piano.

On January 25, the meeting was called to order by the president and opened by an address by W. Smallwood, of the Wyoming Valley Fire Insurance Company, he being a representative of this concern that carries our fire insurance. Mr. Smallwood's talk was very interesting, inasmuch as his father was one of the older threshermen of New York state and although Mr. Smallwood is now a practicing attorney, he in his younger days, had some experience in the operation of threshing machinery. He states that at present he is doing his best to get an honest living as a lawyer, which sometimes causes him to lay awake nights to bring this about. It was unanimously voted to continue our fire insurance with Mr. Smallwood's company.

W. H. Newsom gave another talk on the compensation insurance, outlining the details of the operation of their concern. In addition to being president of our National Association, Mr. Newsom is also president of the Indiana Brotherhood of Threshermen and the Indiana Liberty Mutual Insurance Company. In addition to this, he is a farmer and a thresherman.

The reports of various committees were heard at this time.

The Tuesday afternoon meeting opened with a general discussion, somewhat lengthy, in regard to raising our annual dues, which heretofore have been three dollars per year. This was recommended by the committee on good of the order. It was finally decided to raise the dues to four dollars per year and leave one dollar with the County Locals instead of fifty cents as heretofore.

Appropriate resolutions were adopted in regard to several of our members who passed on during the year.

It was unanimously voted to purchase one thousand organization buttons, as recommended by our National Convention.

The election of officers resulted as follows: president, Harold Slocum, Perry; vice president, Joseph Wilken-son, Palmyra; secretary-treasurer, Harry P. Kellogg, Rochester.

Directors,—Robert Walton, Palmyra; I. D. Hammond, Phoenix; Glen H. Kidd, Waterloo; Roy Canham, Medina; Harvey George, Mt.

Morris; A. S. Jaquish, Burdette; Chas. Wallaber, Sanborn; W. J. Darnell, Batavia; Wesley Thompson, Brockport.

An excellent address was given by Mr. Martin of the Goodyear Rubber Company on "The Use and Care of Belts and Belting." "Organization in New York State, Past, Present and Future," was the topic discussed by H. P. Kellogg. The officers were installed by National President Newsom.

Tuesday evening an entertainment was given by a group of vaudeville artists which was high class in every respect. A number of the ladies attended the evening entertainment.

Wednesday morning, January 26, remarks were made by our former president, Thomas Chorley; vice president Joseph Wilken-son, representatives of the various machine companies who were present, delegates from the County Locals, and threshermen from various parts of the state. The president and secretary were elected as delegates to the National Convention, with F. G. Bachelor and Samuel Bates as alternates. Greetings were received by letter from James Winter and Uri Tracey, who are two of our strongest supporters.

The organization was presented with various articles from exhibitors present which, when sold at auction by J. B. Parker, netted the sum of \$131.72. These exhibits were greatly appreciated and we extend a cordial invitation to the manufacturers to bring their exhibits another year.

During the session, there were telegrams received from the Mayor and Chamber of Commerce, of Syracuse, urging that the next annual convention be held in that city. In addition to this, an invitation was extended by A. G. Kellam, of the J. I. Case Threshing Machine Company, offering us free use of a place to convene, in case we decided to meet at Syracuse. In recognition of this, a vote was taken and it was decided to accept the above invitation so that our next annual meeting will be in Syracuse.

It was by far the most interesting and successful convention ever held by our organization.

H. P. KELLOGG,
Secretary.

We want to impress on the minds of the threshermen in Missouri that we are going to have a real threshers' convention at Moberly, Missouri, March 29, 30, and 31, 1921.

I was at Moberly on January 11 and made all arrangements for this convention; through the Moberly Chamber of Commerce we were able to get Lyric Hall, a place large enough to hold the meetings and at the same time take care of the exhibits.

I am getting out the programs now

for this convention and as soon as they are off the press I will send one to any thresherman who writes me. I am confident that after this next convention we will show up with one hundred members. It is our plan to organize our own fire insurance company and it is the writers opinion that we are going to make a success.

ALBERT SMITH,
Secretary-Treasurer.

The eleventh annual convention of the Ohio Brotherhood of Threshermen, held in Columbus, January 18, 19, and 20, 1921, was by far the largest gathering of threshermen we have had. Our program was carried out as scheduled and the addresses by the speakers were well taken. Resolutions adopted by the Brotherhood follow:

In this period of reconstruction and a return to normal conditions, such as existed prior to the war, we recommend that the Ohio Brotherhood of Threshermen go on record as being one hundred per cent optimistic.

Since the thresher manufacturers, their branch managers and salesmen have given their hearty cooperation and support in making the Ohio Brotherhood a success, we tender to them our heartfelt thanks for their support, and hope to conduct our organization work in such a manner that they will continue this cooperation.

Be it Resolved: That a vote of thanks be given to The American Thresherman and Farm Power, which has always promoted the interests of the Ohio Brotherhood.

That a vote of thanks be given the officers, directors, and legislative committee of the Ohio Brotherhood of Threshermen for their faithfulness to the organization during the past year, and that we on record as pledging the individual support of each member to the officers elected this year, that the organization may grow and accomplish the things for which it was organized.

That we tender a vote of thanks to W. H. Newsom, our national chairman, for the great work he has accomplished nationally, also that we extend thanks to B. B. Clarke for the great interest he has always taken in American threshermen, and for coming a long journey to talk to us.

That the Ohio Brotherhood is opposed to any legislation changing the present law relative to cleats on traction engines, and to the licensing of threshing machinery or its operators.

That we favor a three-day meeting, the third day to be devoted to farm interests and farm subjects.

That a copy of these resolutions be placed on the records of this Brotherhood, copy furnished the legislative committee for their guidance and assistance before the state legislature, and a copy furnished the thresher press.

That we are opposed to the State Constabulary bill introduced by Representative Harding of Warren County.

WARD H. STECK,
D. O. CODDINGTON,
L. B. VAN BERGEN,

Committee.

B. B. Clarke, of The American Thresherman and Farm Power, was welcomed by three cheers and everyone was glad to meet Uncle Sile.

On Wednesday, the convention adjourned, to allow the threshermen to march to the state capitol. There they were greeted by senators and representatives. This was a fine move, and was a treat to those who had never had the pleasure of visiting the building where our laws are made. Nearly every thresherman here met the senator and representative of his district or of his county, and had a personal talk with him in reference to the Proposed Vehicle Law.

The officers elected were: President, A. E. Fisher, Orient; vice president, C. M. Drummond, Gillespieville; secretary and treasurer George Durban, Hilliard; executive committee, C. O. Morrison, Wadsworth; legislative committee, A. E. Fisher, Orient.

The annual insurance meeting was attended by more policy holders than usual, and a larger number of non-policy holders than usual, and a large amount of new applications were written. All of the old officers were re-elected.

The executive committee of the Ohio Brotherhood of Threshermen, at its session on Thursday, January 20, unanimously voted to instruct the secretary-treasurer to pay the assessment of twenty cents per member to the National Association of Brotherhood of Threshermen, as levied by the National Association of Brotherhoods, to help defray the necessary expense in any field of activity which affects legislative matters.

GEORGE DURBAN,
Secretary and Treasurer.

John N. Harvey, an old friend of the Indiana brothers and manager of the Indianapolis branch of the Frick Company, is now settled at his new location, 307 West Maryland street. Threshermen planning to visit Indianapolis during the coming spring should note this new address.

The Indiana Brotherhood of Threshermen met in convention, January 11, at Indianapolis. The morning was occupied with registration and getting acquainted. The afternoon was taken up with routine of business, such as reading the minutes of the last meeting, and the report of the treasurer. These reports were accepted by the association. The secretary's report showed that eighty-four counties had been organized in 1920. We expect next year to show quite a large gain over present county membership. Our county organizer, W. S. Arnold, made his report, which showed that the counties that he had visited were expecting great gains during the coming season.

We had visitors from several states, among them being Tom Davidson, president of the Illinois Association, J. M. Boyer, secretary of the Illinois Association, Clark Staley, secretary of the National Association, Joshua Bohannon, president of the Kentucky Association, H. F. Borneman, president of the South Dakota Association, E. E. Parkinson, Madison, Wisconsin, and B. B. Clarke, Madison, Wisconsin.

Wednesday was taken up with various kinds of business, such as pending road laws, taxation and vehicle licenses on our machinery. Wednesday night was taken up with the road law; it developed



MAKE up your mind right now to use Hettrick Stitched Canvas Belts this year and put to test our claims of better and more economical belt service.

And don't put off your buying until just before you need the belts. That's not good management.

The good farmer looks ahead and plans his purchases well in advance. That way there's no delay or interruption. It pays.

Look over your belts now and order your replacements from Hettrick stocks. All sizes, all widths, for every power machine.

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Toledo
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"The Belt
of Service"

Hettrick
Canvas Belts

The Fastest, Cleanest and Best Self Feeder in the World

The Maytag-Ruth Steel Self Feeder produces results mechanically impossible with any other feeder. You can't slug the cylinder in the Ruth. It takes grain as it comes, any kind—wet—dry—tangled—straight—stack-burned or loose, and feeds it to the cylinder better than human hands can do it.

A Guarantee That Binds

Such faith have we in the RUTH FEEDER, that we guarantee every Ruth Feeder to feed any make or size of separator to its fullest capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stack-burned, wet or dry, piled on the carrier any way you please, without slugging the separator cylinder or loosening a spike, and do a faster, cleaner and better job of feeding than any feeder manufactured by any other company in the world.

BRANCHES:

Kansas City	Wichita	Portland
Indianapolis		Winnipeg
Madison	Lincoln	Fargo
Minneapolis		Philadelphia



Maytag-Ruth

STEEL SELF FEEDER

is built for a lifetime of service and satisfaction. It is designed along strong and sturdy lines and is of all steel and malleable construction.

MAYTAG LIGHT STEEL RUTH

is especially designed for use on small threshers, being built for individual and community threshing. It makes your little machine do big work.

The MAYTAG-RUTH FEEDER is attachable to all standard makes of separators including McCormick and Deering Harvester Threshers. Made in crank or rotary styles.

Write for complete information.

THE MAYTAG COMPANY

DEPARTMENT 5

NEWTON, IOWA

Mention The American Thresherman and Farm Power

into an experience meeting and the threshermen themselves were turned loose, to give their versions of what would be the best road for farmers and threshermen. The Chamber of Commerce was pulled into the controversy; there being only one member of the Chamber of Commerce on the floor, he came to his feet mighty quick to defend his organization. This gentleman's name was George Bockstahler.

Thursday was taken up as Educational Day; quite a number of talks were made on "How to Handle Machinery to the Best Advantage and Get the Most Work Done."

J. B. Parker made a gift to the organization of a beautiful United States regulation silk flag. It is a gift that will be long remembered and cherished by the organization. It represents everything that is good and loyal. Our flag represents truth, love of home and country; and any man that fails to love it is not loyal to his country.

B. B. Clarke of The American Thresherman and Farm Power was made a present of a beautiful gold badge, with gold bars. This gold badge is an emblem of the Indiana Brotherhood of Threshermen. It is needless to say that Uncle Silas went away feeling very proud of this gift from the Indiana brothers.

Thursday evening was taken up with the vaudeville bill and band

concert; pictures commencing at 6 P. M. were shown:—five reels were run of the 1st and 2nd Divisions and of the Rainbow Division. These pictures were taken on the battlefields of France. There were also war pageants put on, representing '76, '61-65, '98 and 1917. In one pageant, Sergeant Alex Arch, the boy who fired the first shot in the World War, Captain O. L. Brown, and Corporal Englestone were introduced to the audience. With the drum corps and buglers, it took ninety people to stage this pageant. There were twelve vaudeville acts.

A military band of forty pieces gave a band concert from 7:30 till 8:15. The vaudeville closed at 11:00 and dancing lasted until 12. It has been estimated that there were four thousand and five hundred people at this show. All seemed well pleased and went away happy.

Friday morning was taken up with unfinished business and the election of officers.

The officers elected are as follows: president, W. H. Newsom, Elizabethtown; vice president, Elmer Crull, Richmond; secretary-treasurer, W. E. McCreery, Indianapolis; general counsel, John Rynerson, Columbus; executive committee, W. H. Newsom, W. E. McCreery, Oliver Buller, Henry Ehreserman, L. H. Collins, Elmer Crull. These officers were installed by Judson B. Parker of The

American Thresherman and Farm Power.

The convention closed Friday noon, January 14. The next meeting will be in January, 1922. Begin to plan now. W. E. McCREERY, Secretary-Treasurer.

The Ontario Brotherhood of Threshermen held a successful convention at Chatham, January 27-29. At this meeting it was voted to form a mutual insurance company; and one thousand dollars was subscribed in twenty minutes' time, so that the committee in charge will be able to offer insurance to the Canadian threshermen before next threshing season.

Mr. W. H. Newsom, Indiana, and Mr. Landis, Ohio, were present to add their forceful energy to the meetings. The Canadian brothers want these men, and the states they represent, to know that their efforts are appreciated. Thanks is extended to the National Brotherhood, of which Mr. Newsom is president.

The convention voted to make The American Thresherman and Farm Power the official organ of the Ontario Brotherhood. This action was taken as an appreciation of the work of this magazine in behalf of better threshing conditions.

Our members will subscribe at the regular rates. Any subscription commissions will be used to help our

insurance men, who can thus make a small commission while soliciting new members and insurance for our organization. These small amounts should help to pay expenses for our new field men.

Our secretary, Byrrell Harris, will send a convention report as soon as minutes can be copied. We want to "get to press early" with our thanks for the coöperation we have had in making this our best convention.

JOSEPH CUSHMAN,
President.

From the neat program furnished this column by George Durban, secretary, it is evident that the Ohio brothers had a convention full of good addresses.

Hon. J. J. Thomas, Mayor of Columbus, Charles Kisecher, L. B. Vanburgen, J. F. Atwood and C. M. Drummond were prominent Ohioans who gave helpful addresses during the two-day program which preceded the insurance meeting. In addition to these men, Indiana, Illinois and Wisconsin were represented by W. H. Newsom, J. B. Parker, B. B. Clarke and R. L. Vanvolkenburg, the last being an Illinois man who spoke on "How to Operate a Threshing Machine."

Music by the Heber Brothers' orchestra, addresses by A. E. Fisher, president, and George Durban, secretary, reports of committees and

ormal discussions all added to the h interest shown throughout the vention. The visit of all thresh- en to the legislature, now in sion at Columbus, was a feature states could imitate to advantage.

As this last "organization copy" es to press, president Bohannon is lling to order his cohorts of Old entucky. Brother Kiracofe is likely aking sure that the Toledo con- tion hall, in the Terminal Build- g, is ready to receive the Ohio d Michigan threshermen who will end the Toledo gathering. The anadian brothers are getting home er three rousing days at Chatham, ntario.

Up to date, secretaries of the rotherhoods have been as prompt Washington correspondents in etting in their copy." Whenever ssible, the convention news has en in the office of The American resherman and Farm Power with- a week after the convention. Dur- g the February conventions, we ust the secretaries will show a milar gratifying promptness. This column wishes to thank those en who have enabled us to publish mplete, up-to-date reports on or- nization matters.

An interesting belting catalog hich came to this office recently is at of a Scotch firm which began aking hand woven belting in the me year that the Continental ngress took an important step ward securing American independ- ce. Since 1776 the Scottish mills ave been turning out a fine grade of lid woven belting, and the story of ow this industry has grown, and the resent uses it finds for its products, akes interesting reading for any rm power user.

This booklet will be furnished on request to any reader of this mag- zine who uses belting. Tables of ensile strength and advice as to care t belts make it a handy reference. ny reader who writes the Stanley elting Corporation, Dept. R, South linton St., Chicago, Illinois, will be urnished with a copy.

At the present rate of increase in ureau employees we will soon have wo government employees to each rivate citizen. In that case the verage man will have to give up yring to support a family and de- ote his surplus to keeping bureau- atic clerks. We have a bureau in Washington for the separate in- estigation of everything under the un except efficient government.— Frank A. Vanderlip.

There has been a drop in the death- ate. This was to have been ex- pected. Months ago it was reported hat the cost of dying had become most prohibitive.—Boston Trans- cript.

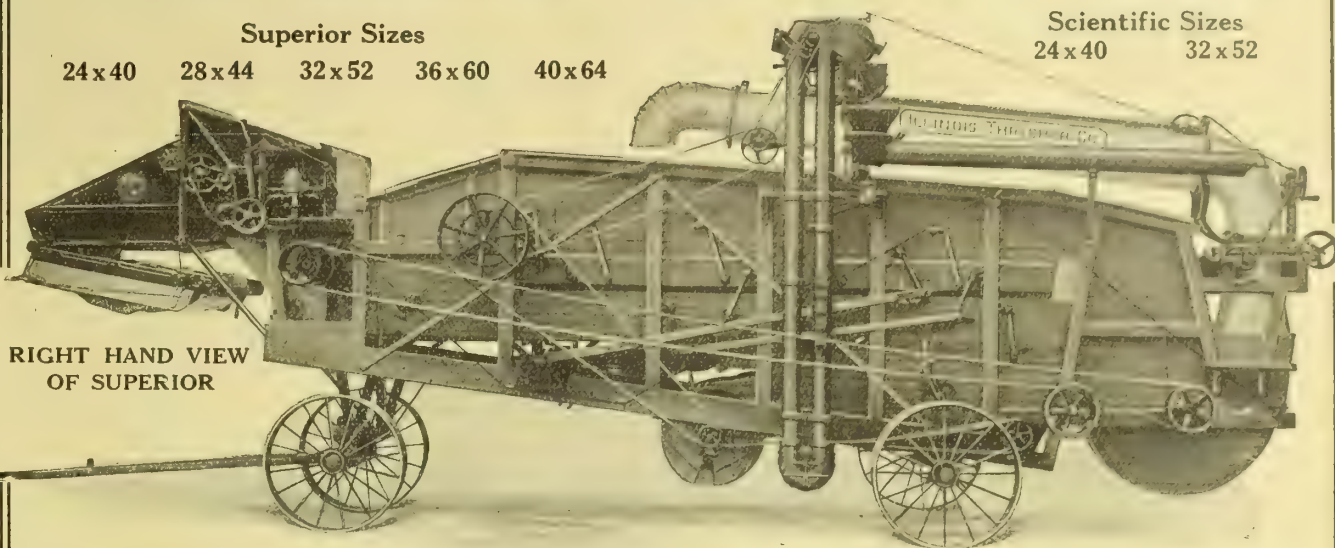
The Illinois Thresher Line

Superior Sizes

24x40 28x44 32x52 36x60 40x64

Scientific Sizes

24x40 32x52



RIGHT HAND VIEW OF SUPERIOR

The Line built for Simplicity and Durability. Designed and built by Wm. N. Rumely and founded on his years of experience.

Superior Threshers are winners in all grain areas.

Scientific Combined Thresher and Huller—two machines in one—a Complete Thresher and a Complete Huller.

Steam Engines in 20 H. P. and 25 H. P. Sizes.

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ILLINOIS THRESHER COMPANY

Sycamore, Illinois, U. S. A.

WM. N. RUMELY, President and General Manager

GEO. E. DUTTON, Vice-President and Treasurer

P. B. McIntyre, Secretary and Sales Manager

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MYERS

SPRAY PUMPS

FOR SPRAYING - PAINTING AND DISINFECTING

THE HONOR-BILT LINE

You may not gauge your success in the growing of fruits and vegetables by the spraying you do. Failures sometimes occur but they are less frequent where spraying has been carried on. Consequently, spraying is of vital importance. It is crop insurance. Almost as necessary as good weather. It reduces the chances of failure and pays big dividends in larger and better yields. You can't afford to do without spraying, neither can you afford to waste your time and efforts by using poor materials and a cheap spray pump.

MYERS SPRAY PUMPS and ACCESSORIES have been and are assisting nurserymen, fruitmen, gardeners, florists, seedmen, farmers and others in their fight against fruit, tree and plant enemies. So complete is the MYERS line and so uniformly satisfactory is the MYERS spraying service that every spraying need is successfully met by it—ATOMIZERS, KNAPSACK AND COMPRESSION SPRAYERS, BUCKET, BARREL AND POWER PUMPS AND COMPLETE OUTFITS, afford a wide range for choice, all styles, regardless of size or capacity, being fully proven and guaranteed for efficient spraying service.

The Season for early Spring operations is just a few weeks ahead. Perhaps you have not given this a thought. Nevertheless, it is the time to become acquainted with the latest means and improved methods for spraying. Why not write us today for a copy of our latest Catalog—mailed to anyone without obligation to purchase—and thus be fully informed about Myers Spray Pumps and what their special features offer as to ease of operation, increased capacity, economical and rapid application of mixtures?

F.E. MYERS & BRO.

175 ORANGE ST. ASHLAND, OHIO.

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Hooking up the reverse lever and shortening the valve travel of your engine will not change the oil feed of the Model "D"

PRACTICAL SIGHT-FEED OIL PUMP

It delivers a uniform feed at all times, no matter whether engine is on the road or in the belt. It feeds just the exact amount of oil that you want to use, be it little or much, and with clock work regularity. No ratchet wheels or pawls to wear and cause trouble—no valve checks in the pump to get clogged up. Adjustable driving parts make it easy to attach to any make of engine.

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BALCYLENE
THE WORLD'S GREATEST HARD OIL

Used by 5000 Threshermen 3000 Tractor Owners

The hard oil you have been looking for. Made from Pennsylvania steam cylinder oil, lard and tallow. One consistency only—medium hard. Color dark green. Takes the place of all kinds of hard oils and greases in all kinds of compression cups. Cools any troublesome bearing and keeps it cool. Unequalled for high speed or low speed work. How about that crank pin on the engine or the main bearings on the sheller?

In order to give every one a chance to test this wonderful hard oil we will mail a one pound box to any machine user for \$.25 post paid.

Write nearest office

BALSO OIL COMPANY
Council Bluffs, Iowa - - - Toledo, Ohio

Study at Home! Learn Gas Traction Engineering while you are working and earning money. We'll teach you by mail. Send for catalog. Address

CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

We Pay \$6 a Day

taking orders for Insyde Tyres—inner armor for automobile tires. Positively prevent punctures and blowouts. Guaranteed to give double tire mileage.

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Tower Bldg., Chicago, Ill. 625 F St., Washington, D. C.
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Our Disc-Jointer

Extra strong. Simple in construction. Takes the place of both old style coulter and jointer. Relieves side draft. Lightens loads. Puts trash and weedseed in bottom of furrow.

Price \$8.00

Cash with order. Attention made of your plow.

Disc-Jointer Co. Earlville, Ill.

Limestone Pulverizers

Sold direct from Factory to Farmer. Write for catalog.

O. B. Wise Pulverizer Co. Knoxville, Tenn.

Write at Once for this Money Saving Book

Valuable book for threshermen. Tells how to get more power out of your steam engine without adding a dollar to your running expenses. Tells how you can thresh 200 to 300 more bushels a day. Tells how you can cut down your coal, oil and water consumption. Write for it now.

A postal will do. Just state the make of your engine, horsepower, whether double or single and say "send your free book for threshermen."

GOULD BALANCE VALVE CO.
300 Oak St., KELLLOGG, IOWA

Listen To Me

THE fellow that is busy "keeping tabs" on his neighbor's business generally makes a poor job of his own affairs. He hasn't time for both.

ONE great trouble with a lot of us is that we try to live a limousine life on a wheel-barrow salary.

THE world is good to everybody. If you don't connect, then it must be you.

LET the world find out how big you are itself. If you start advertising the fact, you might run out of "copy."

DON'T turn the beggar away unfed. He may be your rich uncle in disguise.

LOSE your grouch. A smile has kept lots of men from taking the short route.

REMEMBER, brother, when you are "framing up" on the other fellow and trying to put him "out of commission," you may be acting as your own funeral director.

IF you want success in this world, the first thing you want to do is to get acquainted with yourself. Jumping in the dark is liable to put you on the hospital list. Find out where you "fit in" best and then jump right to it.

CHILDREN have the right spirit. They quarrel and "scrap" with each other but the next day they are all out playing together again and having a good time. Pretty good idea for grown ups, isn't it?

WE notice hundreds of pictures in different papers of girls and women who have won championships at golf, tennis, swimming, rowing, etc. but the game of homemaking and cooking seems to have very few entries.

WHEN you hear a man say he is "getting by," it is a pretty safe gamble that his name will never get on the firm's stationery, and when it comes to old age all that can be said of him was he "got by."

THE man who forges ahead needs no press agent. His work talks for itself. Just remember, "By your acts are ye known," and all the publicity the world won't put you where honest endeavor will.

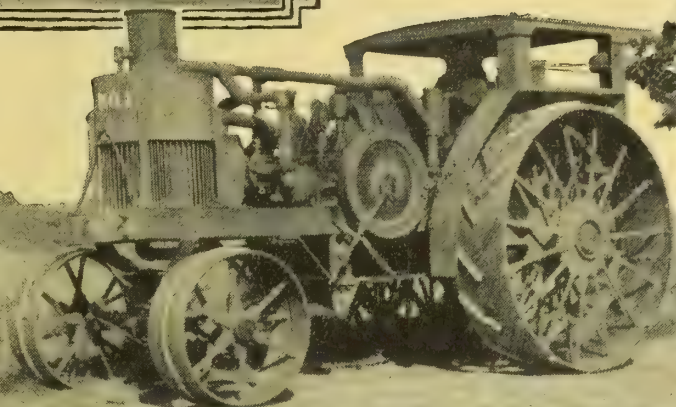
IT is the eternal "squawking" about hard times that make them a fact. Dissatisfaction is a greater breeder than satisfaction, so if you want things to run along smoothly, "boost." "Knocking" things in general doesn't build a thing in the world except graves for prosperity.

ENVIRONMENT is a state of things that whiners, bellyachers and weak-brethren take advantage of to offer as an excuse for their being ne'er-do-wells. If the theory of environment would hold good, a man would wallow with hogs when with them. Your condition is what you make it. I would consider myself weak-kneed if I thought any one could lead me into things I should not go into.

ANDREW CARNEGIE carried water, when a boy, to the men working on the job. Thomas A. Edison was an operator for a telegraph company. Charles Swaib was an office boy. Henry Dougherty, the big Public Utility man, worked around gas plants. You can name men by the dozen who have risen to wealth, power and influence. Instead of preaching the doctrine that the different companies they worked for were oppressors, robbers, and leaches, they each put in their time in finding out and learning all about the company's business and seeing where something could be worked out that would prove beneficial to the company. They built up instead of merely getting their envelopes on pay day. They kept their eyes open for every possible chance to be of benefit to their concern and they finally made themselves so familiar with the business and so valuable that each in his own line became a leader. But they did start, without a dollar's interest in the various concerns they finally virtually owned. They had no time to go to grievance meetings or strikers' meetings, but applied themselves to the upbuilding of the business and every concern has its eyes open to such men as these. "Trouble shooters" don't reach these high places, because their only object is to see how much money they can get out of the company for as little work as it is possible to do. Keep your eye "peeled" all the time, it may be you will be called into the office next.



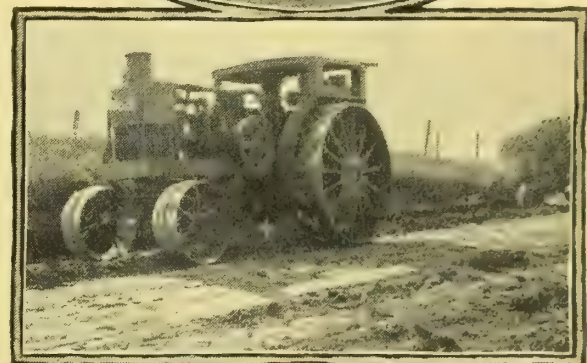
Unretouched photograph of one of Iowa's "Dirt Boulevards," built with Avery Tractors by W. T. Campbell & Son.



This photograph shows first 45-65 H. P. Avery Tractor bought by W. T. Campbell & Son. Photographs below show five additional Avery Tractors also owned by Mr. Campbell.



No. 2



No. 3



No. 4



No. 5



No. 6

Building "Dirt Boulevards" With Avery Road Tractors

A few years ago W. T. Campbell & Son of Council Bluffs, Iowa, purchased an Avery Road Tractor. It did such satisfactory work that they purchased another and another until today they have six of these great power units at work in Iowa, building "Dirt Boulevards," the finest dirt roads in America.

Avery Road Tractors are doing the same fine work in building good roads on all sides of the globe. Ten years of actual service has made them the world's champion road building tractors. On account of their greater simplicity and durability, they stand up under hard road building work better than any other power, giving service at the lowest possible cost.

Avery Road Tractors are guaranteed to build your roads 50 per cent cheaper than the same work can be done with horses or mules, and also do it better. This means cutting your road building costs in two, or building *two* miles of better roads for your present cost of *one*.

Road building is about the hardest test to which a tractor is put. Avery superiority in this field may be partly attributed to its sturdy "Draft-Horse" motor and "Direct-Drive" transmission—two features especially made for heavy-duty work. Other exclusive features are Renewable Inner Cylinder Walls, Adjustable Crankshaft Bearings, practically Unbreakable Crankshafts, Centrifugal Gasifiers, Valves-in-Head, etc.

There are seven sizes of Avery Tractors—each having these exclusive and protected features. Write for Special Road Tractor Catalog or the 1921 Avery General Catalog showing the complete line of Avery Tractors, Avery Tractor-Drawn Machinery and Avery Tractor-Driven Machinery.

It Pays to Avery-ize—"A Good Machine and a Square Deal"

EVERY COMPANY, 334 Iowa St., Peoria, Ill.

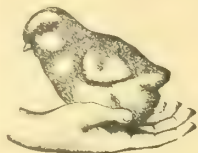
Branch Houses: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles and Sacramento

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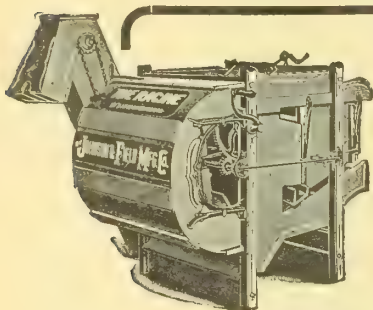


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Shipped anywhere. Safe delivery guaranteed. Our White Leghorns are noted for WINTER EGGS when eggs are HIGH. We also hatch other breeds for meat and eggs from inspected flocks. Prices reasonable. 100,000 chix this season. Write for particulars now.

M. V. NELSON, Prop. Certified Egg Farm Madison, Wis.

Mention The American Thresherman and Farm Power



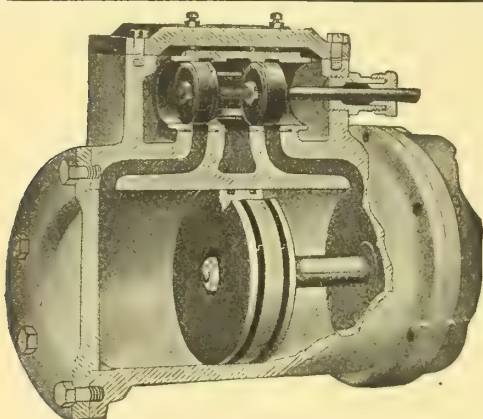
TO Farmers and Seed Dealers.

If your dealers do not sell the **FAMOUS RACINE FANNING MILLS** with bagging attachment which enables one man to clean more grain or seed of all kinds than three men can clean with an ordinary mill, write us for information how you can own one of these mills without it costing you one dollar. **The Racine Fanning Mill** has a seed corn grading attachment which takes out butt and tip grains and enables corn planters to drop from 100 to 400 hills without a miss.

JOHNSON & FIELD MFG. CO.
50 17th St., Racine, Wis.

Manufacturers of Farm and Warehouse and Dustless Warehouse Mills

Mention The American Thresherman and Farm Power



Wouldn't You Want This?

"I can truthfully say that there is a saving of at least twenty per cent in the fuel and water consumption."

The man who said this knows what he is talking about as he has had **three Baker Valves** for some time.

Write for a copy of his letter and our latest folder. They are **FREE!**



Ask about our accurate cylinder rebor-ing and new pistons.

Baker Valve Company
1855 E. 28th St. Minneapolis, Minn.

To get more **Power** in your cylinders, install **Vapor Tight rings**

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Allied Belting

The more particular you are—the more expectant in the way of service—the better Allied Stitched Canvas Belts will suit you.

They are efficient, economical, trouble-proof—cracking good belts. Nowonder farmers have taken a liking to them.

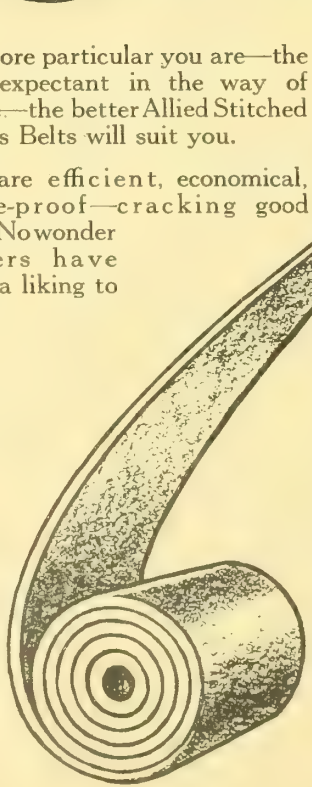
Better Belts—Better Work

That's an undeniable truth. The man who puts system into his buying and uses good belts will get more and better work than the man who buys aimlessly.

Know and remember the name of your belts. And don't keep drifting from one kind to another. That's not the way to belt satisfaction.

Use and stick to Allied Belting. Write for our prices.

The Allied Belting Co.
Greenville, Ohio



Asked and Answered

Question of W. G. H. What will cause connecting rod bearings

to become loose within fifty to one hundred miles of running? Would this indicate a sprung crank shaft or is there some other reason that might cause this trouble.

Answer.—If your connecting rod bearings wear loose within fifty to one hundred miles run and these bearings are properly lubricated, it is very evident that something is badly out of adjustment. A sprung crank shaft might give you this trouble, or connecting rods which have become slightly bent, might cause this difficulty. It is evident that if the bearing is well lubricated and wears so rapidly, something must be out of alignment. If the trouble is always on one particular cylinder probably it lies in the connecting rod being slightly bent. If the trouble may develop on any cylinder, it would seem to indicate that the crank shaft might be slightly sprung or out of perfect alignment.

Question of P. G. C. How can I fix my boiler flues that leak at the fire box end?

This engine has been used about one hundred and ten days since it was rebuilt. I have rolled the flues twice, and if I roll them much more I will make them too thin. The bead on them is good. I have been told to take a short piece of smaller flue and put in the inside of the flue, drive it in tight and roll it. I should also like to ask about firing. Should I fire evenly all over the grate, or fire the heaviest near the door? I have little experience with firing with coal. Most of my work has been with slabs.

Answer.—The most common cause for flues leaking at the fire box end is too heavy a bead. When the bead is too heavy the metal in the bead is likely to get very hot because the heat is not conducted rapidly enough into the water of the boiler. This causes the metal to burn and leaks to develop. A short piece of flue might be inserted as you suggest, and rolled, but has the serious disadvantage that it gives a rough interior to your flue and makes it difficult to clean properly, also it is likely to give you a heavy thickness of metal at the fire box end, which is likely to cause burning, which I have already mentioned. Possibly if you make use of a good automatic beading tool you will be able to get rid of your difficulty without inserting such pieces in your flues.

Coal is rather difficult to fire with and requires considerable experience to get good results. To be effective, the fire should be thin and evenly distributed over the grates, taking care that no holes or dead places appear.

Air follows the course of least resistance and is sure to pass up through any open space there may be in the fire, instead of through the fire as it should. From four to five inches the right thickness for the fuel, soft coal is used. The coal, no matter what kind is used, should be broken into pieces not larger than the two fists in order that it may lie closely together and form a tight even bed over the grates. If large lumps are used, they leave too many open spaces in the grates through which the cold air may pass and the result is a poor fire. Do not stir the fire more than enough to keep it free from clinkers and ashes. It is occasionally necessary to run the pole under the fire to get rid of ashes or, some kinds of coal, to break up the clinkers. Whenever this is done, the fire will die down to some extent and it is best to perform this operation on a rising steam pressure.

Question of B. B. What size main belt pulley should I use on a threshing machine separator to run it at a speed

1075 or 1100 revolutions a minute with a tractor which has a fourteen inch pulley which runs at 590 revolutions a minute?

Answer.—If you have a tractor with a pulley fourteen inches in diameter which runs at a speed of 590 revolutions a minute, and you want to drive a separator with a pulley speed of 1100 revolutions a minute you should have a pulley on your separator of about seven and one-half inches. If you have a pulley eight inches in diameter on your separator you should get a separator speed of about 1033 revolutions a minute.

Question of W. G. P. Can you give me formula for the treatment of water I am using in my boiler?

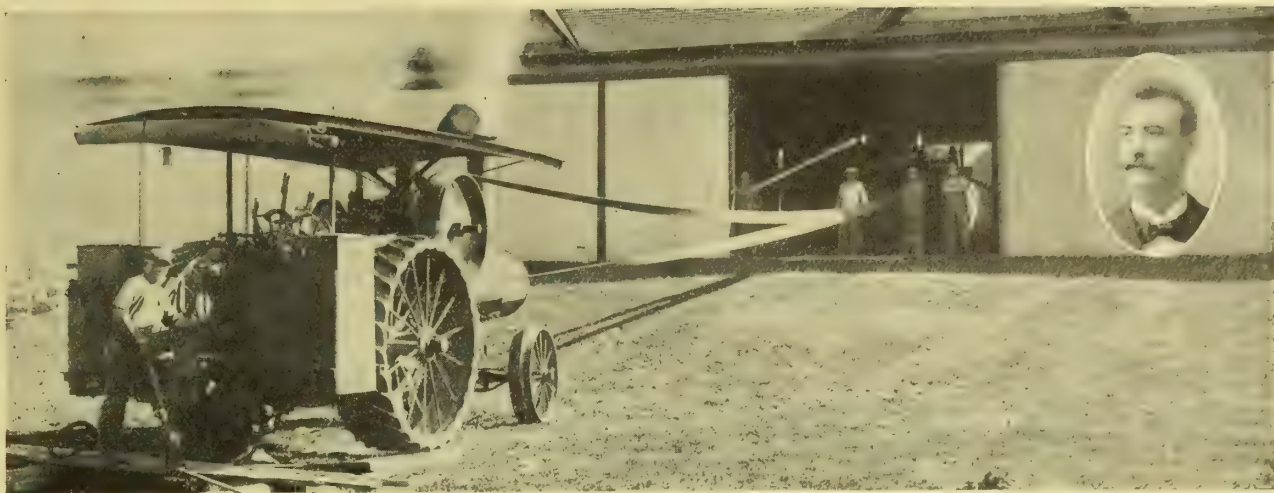
The water scales badly in my boiler and I have used several boiler compounds with but little result.

Answer.—Hard water varies greatly in its chemical make-up and it is impossible to give a chemical treatment that will soften all water. Some waters that scale a boiler very badly may be remedied by using common soda in the water. In other waters where a different mineral is present, this treatment may do good whatever.

We should suggest that you send a bottle of this water to your State Agricultural College and have it analyzed. The chemist there can tell you then just what treatment would need in order to soften it more easily.

Boiler graphite often is used with excellent success by threshermen. The action of the graphite is to

PORT HURONS are YOUR BEST BUY



OUTFIT OF JOHN STRUPP, JR., HARTFORD, WISCONSIN. MR. STRUPP'S PORTRAIT IS INSET AT THE RIGHT. READ HIS LETTER.

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor Back teeth made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.



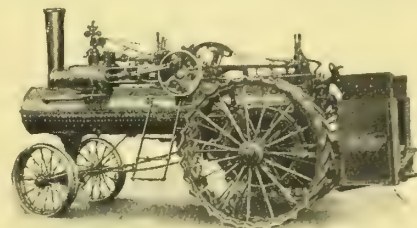
The famous Mule-Kick Separation bats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing. Five sizes. Get our free catalog.

JOHN STRUPP, Jr., Hartford, Wisconsin, whose portrait and machinery are shown herewith, wrote us on Nov. 8, 1920, regarding the new engine bought in the spring: The 19 H. P. Longfellow High Pressure Compound engine I bought of you cannot be beat in any way. It is very easy to handle on the road, and it doesn't make me feel uneasy when it comes to a tough move. During the 63 days which I threshed this season it gave me no trouble whatever, and I think it is one of the best engines built. I am a thresherman of 32 years' experience and have handled different makes of engines but none of them can compare with my Port Huron. It has lots of power and is very economical on coal and water. (Signed) John Strupp, Jr.

Port Huron Engine & Thresher Company
Home Office and Factory: **PORT HURON, MICH.**

Branches:
Port Huron Co., of Ill., Peoria, Ill. Port Huron Mach'y Co., Ltd., Des Moines, Ia. Port Huron Engine & Thresher Co., Wichita, Kans. Port Huron Mach'y Co., Ltd., Minneapolis, Minn. Port Huron Mach'y Co., Ltd., Lincoln, Nebr. Port Huron Engine & Thresher Co., Logansport, Ind. Port Huron Co., of Ill., Moberly, Mo. Foreign Trade Office, 24 State St., N. Y. City.

PORT HURON Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market



today. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them. Two sizes. Catalog free.

Mention The American Thresherman and Farm Power

often the scale as it is being deposited that it will crumble off and fall to the bottom of the boiler where it may easily be blown off with the steam or cleaned out from the hand holes in the boiler.

Question of W. A. G. Please tell me how to square up a threshing machine cylinder preparatory to rebabbitting a cylinder shaft. I understand how to pour the babbitt.

Answer.—You will not find it at all difficult to line up the cylinder of your threshing machine separator preparatory to rebabbitting of the boxes. After the box has been well cleaned and prepared to receive the babbitt, the shaft should be blocked up until it is near the center of the box as possible; then check up carefully to see how your cylinder teeth set in relation to the concave teeth. You doubtless have had enough experience in threshing to know what the relation between the cylinder teeth and the concave teeth should be. Be sure that the cylinder is at the proper height so that the teeth mesh nicely and that it is in such position that the cylinder teeth pass between the concave teeth with an equal distance on each side of them. Look at the teeth of the cylinder in relation to those of the concave will show you whether or not you have the blocking done just as it should be.

You say that you have had experience in babbitting, so it probably will be unnecessary to give any instructions about the applying of the putty and the heating and pouring of the metal.

Some Reflections About Kansas

The National Association of the Brotherhoods of Threshermen, under the push and pep of President W. H. Newsom, is making itself felt in many ways of usefulness. The Association has strengthened the lines of thresher organizations in many states where they needed assistance.

An effort is being made to reorganize Kansas threshing interests and put a real organization on its feet, and the Lord knows Kansas needs it. No state has had as much effort put forth in its behalf in years past as has Kansas, but threshermen can never hope to effect a real organization when some are throwing wrenches in the gears, and others are wholly indifferent to their real needs. The time seems ripe for a reorganization of this grand old state, and the placing of one good strong organization in the field, backed by all interests and factions. Wichita would seem to be the logical place for holding the conventions if it can be done in perfect harmony and with everybody's assistance. But, if it is to be turned into a sales proposition, and with the single thought of having

a big social time but with no thought of a business program being carried out as in other states, it will be a repetition of the past; time and money will be spent for naught.

For ourselves, when it has been shown that real organization is desired, and when everybody is ready and willing to pull together, we shall be found doing our part, as we have done it in the past, in Kansas and elsewhere. Let the brethren of Kansas stand forth and show their good intentions!

One Way to Save Grain

Millions of bushels of wheat and other grains representing millions of hard earned dollars are lost in the straw stacks of this country by grain being blown over into the strawstack by the threshing machine, due to the variation of the fan speed.

To perfectly separate the grain from the chaff, absolutely uniform air velocity through the grain sieve is necessary, and because of the over- or under-loading of the threshing machine this perfect separation has been practically impossible.

To secure even fair results required the constant attention of the engineer in keeping the speed of the power unit nearly uniform, the separator tender was obliged to frequently change the shutters, and the feeder was constantly on the alert to maintain an even flow of grain into the

cylinders. The failure of any one of these three to do his work right was a loss to all concerned.

A new invention reported by Harry W. Bolens, Port Washington, Wisconsin, is said to eliminate these troubles and save the grain by keeping the fan speed uniform, regardless of the speed of the separator.

When grain is hard to thresh and the speed of the cylinder must be increased by speeding up the engine, this increased speed has no action on the fan. The fan will not speed up and the velocity of the air through the grain sieve remains normal, unless it is desired changed, and this change is accomplished by a simple adjustment. Experience has shown, Mr. Bolens says, that threshing machines equipped with this governor can be speeded up twenty per cent without changing the revolution per minute of the fan.

"There are no more enterprising young men. Why, I remember when it was a common thing for a young man to start out as a clerk and in a few years own the business."

"Yes, but cash-registers have been invented since."—Virginia Reel.

Lord Bryce's announcement that the world is at the brink of an abyss is reassuring. We had imagined we were at the bottom of it.—Washington Post.

For Sale and Want Department

If your engine is too small or somewhat worn, if you have a thresher, feeder, stacker, shredder, sheller, cream separator, baler, wood saw, farm land, or anything else that you would like to get rid of—

Let us help you sell it

A "For Sale" ad in these columns will put you in instant touch with thousands of men, among whom there is sure to be a goodly number who are anxious to buy just what you have to sell. You can also find just what you want if you will advertise your wants in these columns.

Fix up a little ad for the next issue and start things moving right away. Quick sales come from our "For Sale and Want Ads" and the cost is only trifling when you consider the service.

Twelve cents a word each month. Remittance to accompany order. Copy for this department must be in our hands by the first of the month.

POSITIONS WANTED.

WANTED—Position as tractor engineer, road or field; three years' experience, threshing and breaking. Theo. Pearson, R. 1, Fonda, Ia.

POSITION RUNNING LARGE TRACTOR—I have knowledge and years of experience. Willard Hays, Spencerville, Ohio.

WORK WANTED—Expert boiler welding. Don't scrap that engine. Cracks, bulges, patches, staybolts; work guaranteed. Will call anywhere. Make dates now. Wire or write. A. A. Koch, Albert Lea, Minn.

WANTED—To hear from man in Northwest who wants tractor man for whole season or by year. Have had eight years' experience grading and threshing with large tractor. Married, with two small children. Geo. Whitson, Dunkerton, Ia.

WANTED—Steady job by married man, as engineer, with some one who uses their traction engine the year round; prefer job in Michigan; fair wages and living conditions; five years' experience; graduate of the Clarke School of Traction Engineering. C. G. Rider, R. 5, Jackson, Mich.

HELP WANTED.

WANTED—Engineer for coming season. State wages and experience. Chas. S. Martin, R. 3, Colony, Kans.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

SELL OIL, GREASE, PAINT, SPECIALTIES for immediate and summer delivery. All or part time. Commission basis. Should have car or rig. Samples free. Write for the attractive terms. Riverside Refining Co., Cleveland, Ohio.

AGENTS in every state to sell "The Gospel of Freemasonry" by Uncle Silas. Price \$1 a copy. Guaranteed to give entire satisfaction or money refunded. Proceeds devoted to charity. Address, B. B. Clarke, care Clarke Publishing Co., Madison, Wisconsin.

FOR SALE.

FOR SALE—18-H. P. Aultman & Taylor engine. Geo. Rosander, Perry, Ia.

FOR SALE—15-H. P. Case engine. John Bodenberger, Perry, Ia.

FOR SALE—30-60 OilPull. Box 33, Ravenna, Nebr.

FOR SALE—Seed potatoes, formaldehyde treated. Improved farms, machinery. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE CHEAP—35-70 Minneapolis tractor, in good shape. Chas. E. Hermon, McComb, Ohio.

FOR SALE—12-H. P. Case engine, re-fueled, condition good. O. R. Meek, Odon, Ind.

FOR SALE—9-10 Frick; 25-H. P. Rumely double. Wm. Vandre, Mendota, Ill.

FOR SALE—25-H. P. Wood Bros. engine. Chas. Holmquist, Axtell, Nebr.

FOR QUICK SALE—30-60 Titan, used little, \$385. Will Hey, Baldwin, Kans.

FOR SALE—One 30-60 Rumely OilPull, \$1200. Anton Juhl, Brayton, Iowa.

FOR SALE—Star water well drilling machine and tools, all in good shape. Bert C. Kinnaman, Noblesville, Ind.

FOR SALE—Avery two-row motor cultivator, used as demonstrator. Price, \$400. Albert Henry, Platte City, Mo.

FOR SALE OR TRADE—30 International. Want Fordson. Oscar Rude, R. 2, Madison, Wis.

FOR SALE—Heider tractor and three-bottom Rock Island plow. T. W. Rabe, R. 2, Gresham, Nebr.

FOR SALE—Keck-Gonnerman 16 engine on 18 boiler, \$750. Henry Metzger, Boonville, Ind.

FOR SALE—25-H. P. Rumely engine in good shape. Theo. Thummel, Tipton, Kans.

FOR SALE—Oliver automatic tractor plow, 2-14, complete. A bargain. Chas. Peck, Woodburn, Ind.

FOR SALE—19-H. P. Port Huron engine in first-class shape. Fred Haszler, Box 77, Tonica, Ill.

FOR SALE—Avery 12-25 tractor, used two seasons; price \$750. H. Armstrong, R. 6, Carthage, Ill.

FOR SALE—30-32 Garden City, 24-28-32 Ruth, 32 Heineke. A. C. Staffin, Sidney, O.

FOR SALE—One 12-25 and one 8-16 H. P. rebuilt and repainted Avery tractor. Avery Co., Madison, Wis.

FOR TRADE—For good threshing rig, 160 acres near Highmore, South Dakota. Fred Klinkner, Scotland, S. D.

FOR SALE—20-H. P. Nichols & Shepard steam engine in good condition. Very cheap. F. M. Schwab, Mankato, Minn.

FOR SALE—Republic truck. Engines bought and sold. F. Geitz, Edgerton, Minn.

FOR SALE—30-60 Pioneer tractor; 32x54 Avery separator, gas tank and belts. Box 184, Mylo, N. Dak.

FOR SALE—One well drill, good condition, fully equipped. Wm. Hamilton & Son, Ellsworth, Wis.

FOR SALE—12-20 Rumely OilPull. Like new, cheap. Clarence Kelley, Mishawaka, Ind.

FOR SALE—Blaisdell screw cutting engine lath 13x6. One crosshead pump. J. M. Thurmes, Hampton, Minn.

FOR SALE—120 acres cutover land in St. Louis County, Minnesota. Cheap and easy terms. H. Little, Gordon, Wis.

FOR SALE CHEAP—40-inch Garden City feeder. Have no more use for same. Len Fox, Farmersville, Ill.

FOR SALE—24x43 Russell separator, complete. Used two seasons. Levi Good, R. 4, Youngstown, Ohio.

FOR SALE—18-inch Sprout Waldron attrition feed mill; good as new. Price, \$500. Albert Steckelberg, Lodi, Wis.

FOR SALE—One new six-hole Sandwich corn sheller, with extension feed. Address G. R. Smith, Bigelow, Kans.

FOR SALE—Besser concrete tile machine, makes tile from four to sixteen inch. F. E. Cole & Son, Toulon, Ill.

FOR SALE—One Nelson hood, \$20; one Myers tank pump, \$5. Both like new. J. W. Ault, Ayrshire, Ia.

FOR SALE—Dain belt power hay press, good as new; a bargain at \$250. Bertelsen & Harders, Ruthton, Minn.

FOR SALE—12-H. P. Advance, No. 12832, A-1 shape, \$600 cash. Mrs. Martha Tripp, Zaleski, Ohio.

FOR SALE—Russell engine, 14-H. P.; No. 1 Birdsell huller, A-1 condition. D. O. Etchison, R. 5, Savannah, Mo.

FOR SALE—Twin City 40-80, new valve-in-head engine. Bargain. J. L. Kuhn, 2444-35 Ave. S., Minneapolis, Minn.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—Garden City feeder and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Pitts double 18-horse engine and Case 40x62 separator. Chas. Wycoff, Wyoming, Ill.

FOR SALE—One 40-inch Ruth feeder and one Gandy drive belt. J. R. Hanson, Egeland, N. D.

FOR SALE OR TRADE—One Huber tractor, large motor, like new. What have you? D. K. Roth, Gibson City, Ill.

FOR SALE—36x56 Peerless separator, feeder, weigher, blower and belts. J. A. Voyles, New Douglas, Ill.

FOR SALE—25-H. P. Reeves engine No. 2266, A-1 condition; \$1200 for quick sale. Frank Haiduech, Martinsburg, Mo.

FOR SALE—One Moline two-row tractor cultivator, new, never set up. One binder hitch, new. Price right for quick sale. D. E. Long, Wadsworth, Ohio.

FOR SALE—Nichols & Shepard threshing rig; Birdsell huller; Ottawa C sheller. Everything good and complete. Benj. J. Schneider, Lowpoint, Ill.

FOR SALE—\$2200 takes complete rig. 19 Port Huron; 40x60 Nichols & Shepard separator, five years old. Frank Serrine, Granville, Ill.

FOR SALE—Photographs of threshermen's convention, Columbus, Ohio, \$1.50 in advance. American Photograph Co., Columbus, Ohio.

FOR SALE—One Ferguson well drill steel machine, new. Would consider a car or truck. W. H. Schanfeld, Alta Vista, Ia.

FOR SALE—One 20-H. P. Pitts engine, \$1800; one 16-H. P. Pitts engine, \$500; one 18-H. P. Reeves engine, \$1000. W. H. McFarland, Lodi, Wis.

FOR SALE—One 20-horse Reeves cross compound engine, as good as new. One 18-horse Gaar-Scott engine, simple, late type. Geo. H. Myers, R. 1, Rockford, Ill.

FOR SALE—Breaking plows for brush and marsh lands from two 20-inch to four 24-inch gangs. Also five-bottom Avery self lift, \$300. C. R. Vehrs, Neokosa, Wis.

FOR SALE—One 36x60 Huber separator, good as new, complete with 150-foot new drive belt and Rockwood pulley. Walker & Wright, Adams, Ind.

FOR SALE—Case 15-40 steamer, cab and contractors' fuel bunkers; good condition. Bert Kinnaman, Noblesville, Ind.

FOR SALE—One New Ottawa F sheller with thirty-foot drag, \$525 f. o. b. shipping point in Illinois. Address R. W., care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE—New Kansas City hay press 16x18; self feeder, capacity 3 1/2 tons an hour. \$325 if taken at once. Claude L. Truman, Artesian, S. Dak.

FOR SALE—Avery 18-36 tractor, slightly used. Hart-Parr 25-60, in good condition. Wallace Chamberlain, Clifton, Dak.

FOR SALE—Rotary fuel pump, new split-wood pulley, Western sheller. Avery tractor four-bottom plow, new drive belts. Harry F. Pick, Chenoa, Ia.

FOR SALE—Three No. 514 rebur Bemiller sawdust blowers, complete \$55 each. Bemiller Foundry & Machine Co., Belleville, O.

BARGAINS—16-H. P. steam engine 9-H. P. Case tractor, steam pump vulcan breakers, Galloway tractor. W. Mielke, Guttenberg, Iowa.

FOR SALE—Avery threshing machine good as new; 18-36 tractor; 28x4 separator, belt all complete. Geo. Clerents, Highland, Ill.

FOR SALE—Large Case steam threshing outfit with extension feeder. Good shape, priced low. Walter Briney, Robin Ia.

FOR SALE—33x54 Leader separator complete with wind stacker, feeder and weigher. Good order. R. H. Denham, Grange, Ohio.

FOR SALE—Reeves 40-65 gas tractor A-1 shape, \$1800. One six-disc La Crosse plow, used but little, \$200. B. A. Danic Croft, Kans.

FOR SALE—18-horse Nichols & Shepard steamer, in good shape. Ready for business, \$375. Claude Drake, Mead Kans.

FOR SALE—36x57 Belleville separator with feeder and blower. Too large for my tractor. Want smaller machine. J. H. Knepper, New Athens, Ill.

FOR SALE—One 500-foot, 4 1/2-inch well machine, R. R. Howell make, as good as new. \$1100 will take it. Fred Blum, Belle Plaine, Minn.

FOR SALE—20-H. P. Case rig complete 20-H. P. Huber engine; 36x60 Port Huron separator; 32x54 Huber separator. Jas. Klase, Fairbury, Nebr.

FOR TRADE—Eighty acres of land Wichita, County, Kansas, clear, for 25-H. P. steam engine in good condition. Joseph Witt, Russell, Kans.

FOR SALE OR TRADE—20-40 Case tractor; 36-inch Case separator; Garden City wing feeder. John W. Walsh, Sioux S. Dak.

FOR SALE OR TRADE—12-24 Russell or 12-20 Galloway tractor, preferred Ottawa sheller. What have you? 47 Wakley St., Omaha, Nebr.

FOR SALE OR TRADE—For light tractor—Avery 12-25 and P & O four-bottom plow. Price \$500. Harvey Power, Fremont, Mich.

FOR SALE—Rebuilt Parrett, Wal Cub, Heider, Fordson. Indiana Triang Motors Co., 155 Kentucky Ave., Indianapolis, Ind.

FOR SALE—Have a 16-H. P. Nichols Shepard single cylinder engine. Will sell parts for repairs, cheap. Leo Farren Menlo, Ia.

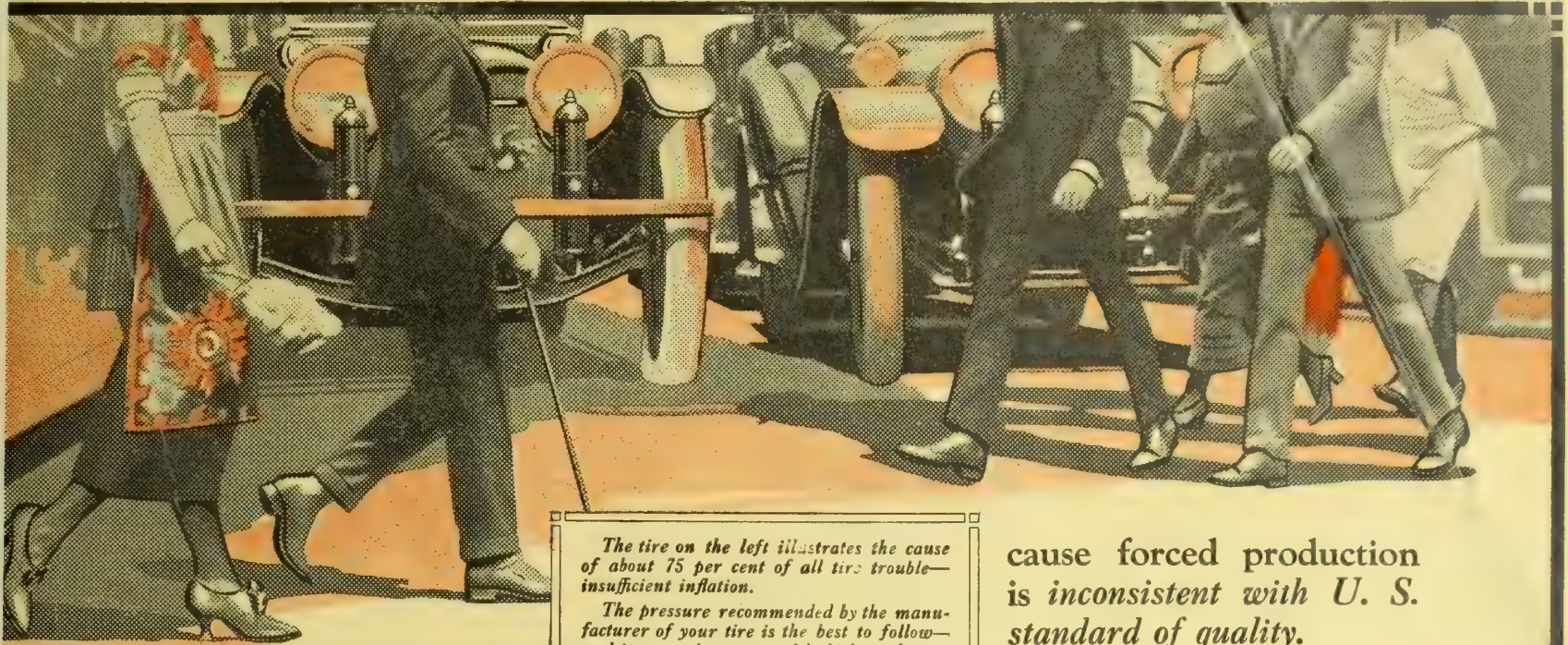
FOR SALE—Smalley alfalfa cutter No. 26 with recutter. Mounted on truck and blower for silo filling. Like new. W. Buhr, Readlyn, Iowa.

FOR SALE—J. I. Case 65-H. P. Case tractor type; 36x60 Cape New Model thresher, new in 1919, in excellent condition. Luther Halliday, Shipman, Ill.

FOR SALE OR TRADE—20-35 Avery tractor with five-bottom power lift plow, in good condition. Also eight-bottom power lift plow. H. B. Stafford, 406 E. Ave. N., Lyons, Kans.

FOR SALE—20 Reeves, 16 and 18 Avery 15 and 45 Case, 20 Rumely steam engines, 45 I. H. C. tractor, 33x56 Reeves 36x60 Advance separators. All rebuilt. Evans Bros., Sandwich, Ill.

Opinions about Tires should be Weighed as well as Counted



The tire on the left illustrates the cause of about 75 per cent of all tire trouble—insufficient inflation.

The pressure recommended by the manufacturer of your tire is the best to follow—and it cannot be estimated by kicking the tire or punching it. The regular use of a reliable air gauge is the best safeguard against punctures, rim cutting and fabric breakdown.

THERE is hardly a motorist who hasn't at sometime or other in his experience had a tire dealer attempt to sell him a tire by representing it as the fastest seller in town.

More attempts are probably made to sell tires by playing to the motorist's alleged weakness for "crowd of buyers" than by any other known method of selling.

* * *

The *experienced* motorist, of course, refuses to surrender his individual judgment to any crowd or mass of whatever size.

Too often he has seen the results of accepting

opinions at their face value, without first finding out *what they are based on*.

And you will find him going more and more to the dealer who has something to offer in support of his tires other than "crowds of buyers" and "numbers of sales."

* * *

The opinion in favor of U. S. Tires is not based solely on the number of them in use.

Great as that number is, it is due to something besides clever arguments.

Thousands of motorists today are putting up with second choice tires be-

cause forced production is *inconsistent with U. S. standard of quality*.

The United States Rubber Company's enormous investment—greater than that of any concern in the industry—has always been aimed *solely* at quality.

Building a *tire* first and a market afterwards. Thinking of the *individual user* instead of the number of sales.

One of the reasons, perhaps, why there is now a scarcity of U. S. Tires.

* * *

If the time ever comes when U. S. Tires can be supplied to all, or nearly all, of the people who want them, they will still have *more to recommend them* than merely the largest following.

United States Tires

United States Rubber Company



Fifty-three
Factories

The oldest and largest
Rubber Organization in the World

Two hundred and
thirty-five Branches

Watch Case Threshing Rigs This Year

As this message to threshermen is being written, new Case threshing outfits are being bought; and those already in the field are being "tuned up" for the season's run.

When this message shall be read, all these thousands of Case threshing outfits will be in operation in every state and country where there is grain to be threshed.

Watch the work of these rigs. Note that superior design, material and construction give general freedom from break-downs and delays. Note the characteristic prosperity of owners of Case outfits for custom threshing; the universal satisfaction of owners of Case light-weight threshers used for individual or neighborhood work.

Case Galvanized Steel-built Threshers, for clean threshing, thorough separation, perfect cleaning and unequalled saving are built in six sizes.

Case Kerosene Tractors adaptable to the general power requirements of any farm, are built in three sizes of standardized design: 10-18, 15-27 and 22-40 H. P.

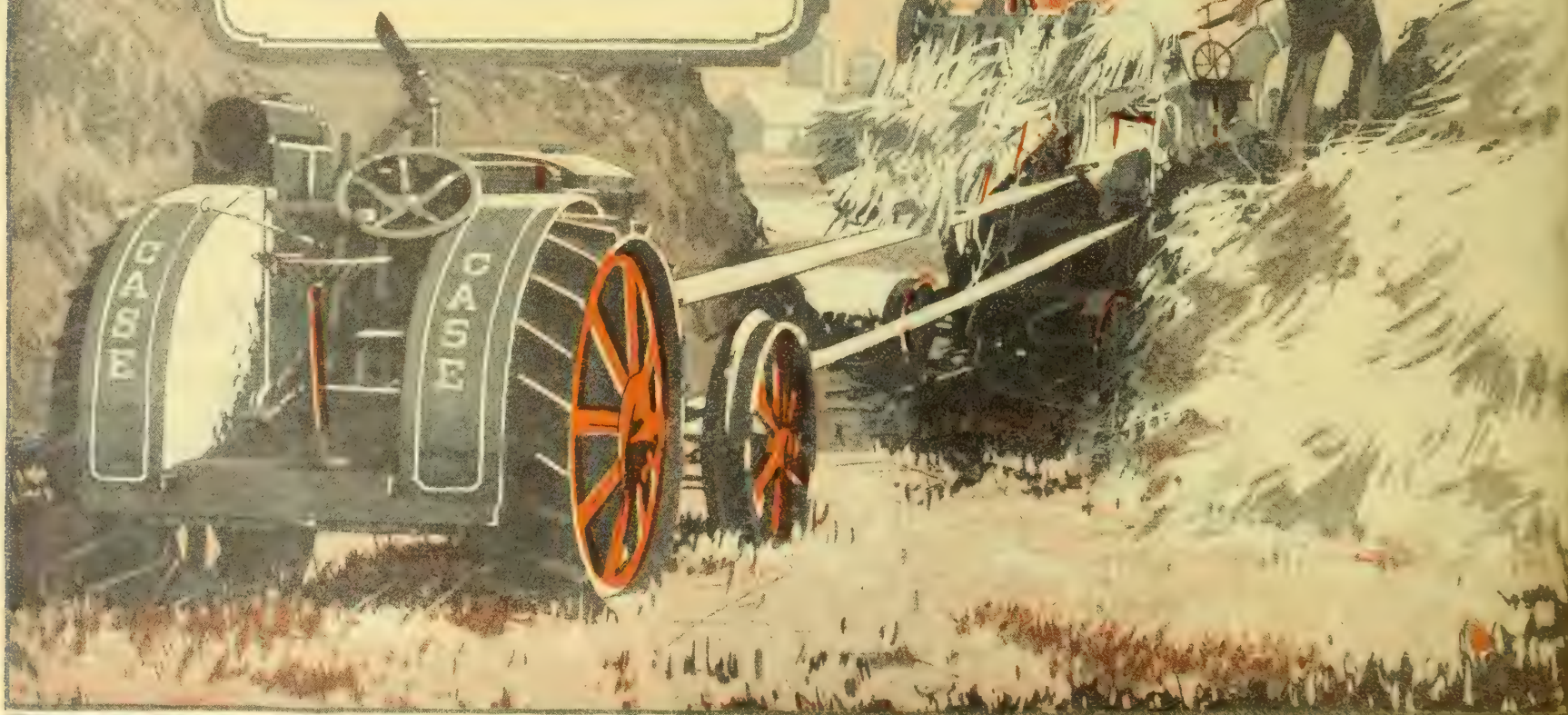
Case Steam Tractors with their established dependability are preferred by some operators, and are used to advantage for certain kinds of work. Sizes: 30, 40, 50, 60, 65, 75, 80 and 110 H. P.

Write for free catalog of Case Power Farming Machinery

J. I. Case Threshing Machine Co., Inc.

Dept. DJ-8, Racine, Wis., U. S. A.

Making Superior Farm Machinery Since 1842



To avoid confusion, The J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Walrus Tractor Company, or the J. I. Case Plow Works Co.

CASE
TRADE MARKS REG. U. S. PAT. OFF. AND IN FOREIGN COUNTRIES
POWER FARMING MACHINERY



Look for the
EAGLE
Our Trade Mark

NOTE:
We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

The AMERICAN THRESHERMAN AND FARM POWER



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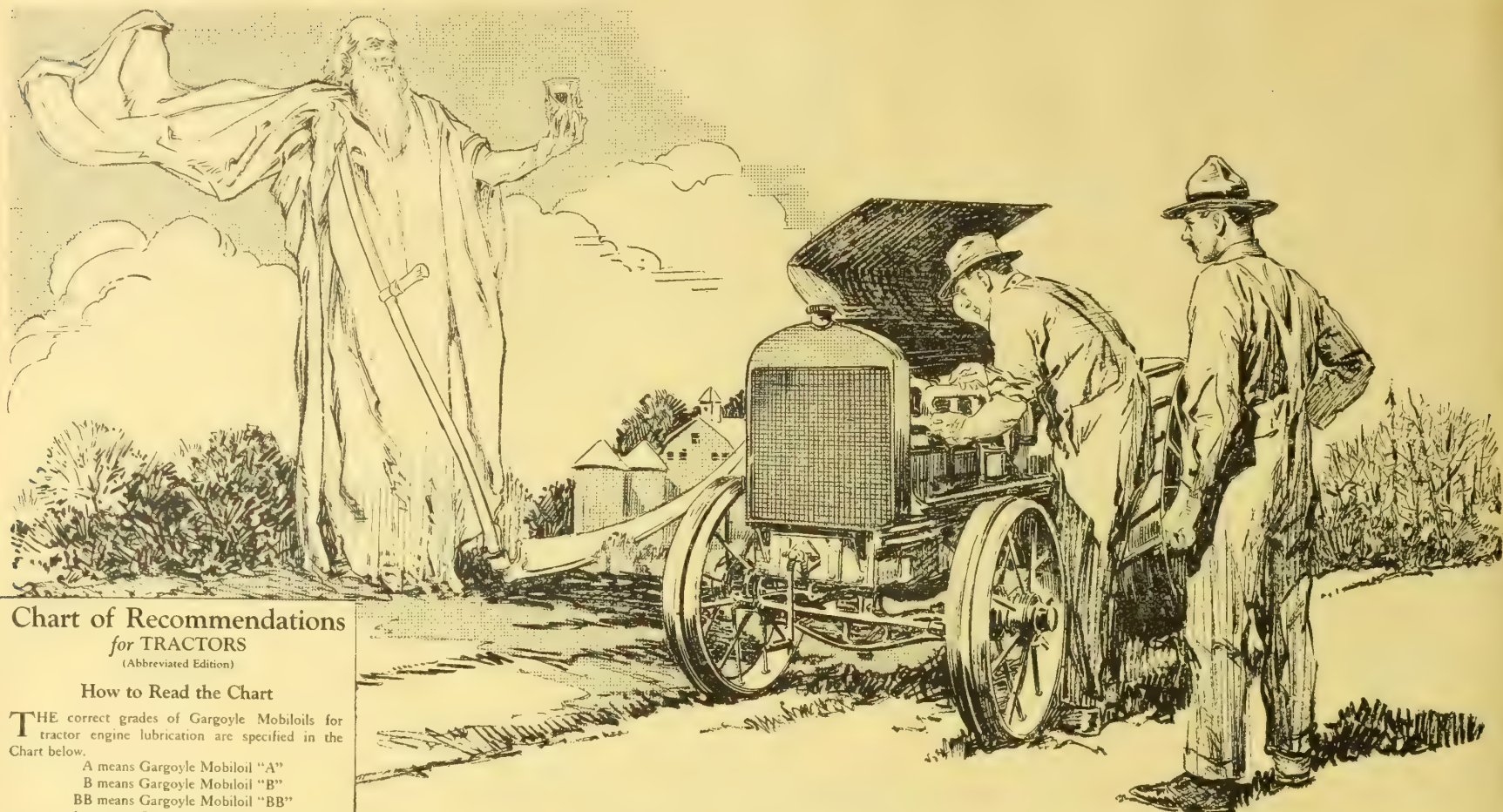


Chart of Recommendations for TRACTORS (Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

1920	1920		1919		1918		1917		1916	
NAMES OF TRACTORS	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Allis-Chalmers General Purpose										
All Other Models										
All Work	BB	B	A	BB	A	BB	B	B	A	A
Capitan	BB	A	BB	A	A	A	BB	A	A	A
Aufman-Tucker	BB	A	BB	A	BB	BB	BB	A	A	A
" 22 4	BB	A	BB	A	BB	BB	BB	A	A	A
" 25 50, Wackerling	BB	A	BB	A	BB	BB	BB	A	A	A
" 30 Other Models	BB	A	BB	A	B	A	B	A	A	A
Avery	C	A	BB	A	A	A	A	A	A	A
" 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410 1420 1430 1440 1450 1460 1470 1480 1490 1500 1510 1520 1530 1540 1550 1560 1570 1580 1590 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690 1700 1710 1720 1730 1740 1750 1760 1770 1780 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100 2110 2120 2130 2140 2150 2160 2170 2180 2190 2200 2210 2220 2230 2240 2250 2260 2270 2280 2290 2300 2310 2320 2330 2340 2350 2360 2370 2380 2390 2400 2410 2420 2430 2440 2450 2460 2470 2480 2490 2500 2510 2520 2530 2540 2550 2560 2570 2580 2590 2600 2610 2620 2630 2640 2650 2660 2670 2680 2690 2700 2710 2720 2730 2740 2750 2760 2770 2780 2790 2800 2810 2820 2830 2840 2850 2860 2870 2880 2890 2900 2910 2920 2930 2940 2950 2960 2970 2980 2990 3000 3010 3020 3030 3040 3050 3060 3070 3080 3090 3100 3110 3120 3130 3140 3150 3160 3170 3180 3190 3200 3210 3220 3230 3240 3250 3260 3270 3280 3290 3300 3310 3320 3330 3340 3350 3360 3370 3380 3390 3400 3410 3420 3430 3440 3450 3460 3470 3480 3490 3500 3510 3520 3530 3540 3550 3560 3570 3580 3590 3600 3610 3620 3630 3640 3650 3660 3670 3680 3690 3700 3710 3720 3730 3740 3750 3760 3770 3780 3790 3800 3810 3820 3830 3840 3850 3860 3870 3880 3890 3900 3910 3920 3930 3940 3950 3960 3970 3980 3990 4000 4010 4020 4030 4040 4050 4060 4070 4080 4090 4100 4110 4120 4130 4140 4150 4160 4170 4180 4190 4200 4210 4220 4230 4240 4250 4260 4270 4280 4290 4300 4310 4320 4330 4340 4350 4360 4370 4380 4390 4400 4410 4420 4430 4440 4450 4460 4470 4480 4490 4500 4510 4520 4530 4540 4550 4560 4570 4580 4590 4600 4610 4620 4630 4640 4650 4660 4670 4680 4690 4700 4710 4720 4730 4740 4750 4760 4770 4780 4790 4800 4810 4820 4830 4840 4850 4860 4870 4880 4890 4900 4910 4920 4930 4940 4950 4960 4970 4980 4990 5000 5010 5020 5030 5040 5050 5060 5070 5080 5090 5100 5110 5120 5130 5140 5150 5160 5170 5180 5190 5200 5210 5220 5230 5240 5250 5260 5270 5280 5290 5300 5310 5320 5330 5340 5350 5360 5370 5380 5390 5400 5410 5420 5430 5440 5450 5460 5470 5480 5490 5500 5510 5520 5530 5540 5550 5560 5570 5580 5590 5600 5610 5620 5630 5640 5650 5660 5670 5680 5690 5700 5710 5720 5730 5740 5750 5760 5770 5780 5790 5800 5810 5820 5830 5840 5850 5860 5870 5880 5890 5900 5910 5920 5930 5940 5950 5960 5970 5980 5990 6000 6010 6020 6030 6040 6050 6060 6070 6080 6090 6100 6110 6120 6130 6140 6150 6160 6170 6180 6190 6200 6210 6220 6230 6240 6250 6260 6270 6280 6290 6300 6310 6320 6330 6340 6350 6360 6370 6380 6390 6400 6410 6420 6430 6440 6450 6460 6470 6480 6490 6500 6510 6520 6530 6540 6550 6560 6570 6580 6590 6600 6610 6620 6630 6640 6650										

The Decisive Year

Utmost economy will help you over it

IN answer to the universal cry for production, most American farmers invested their profits to render their farms more efficient. Many of them drew heavily on future profits.

Today prices have dropped. Bankers are calling loans and restricting credit. Many farmers view the future with anxiety.

These conditions are temporary. Food is a prime necessity. Authorities state that it is a question of weathering safely the next year.

This can be done by the utmost economy.

Soon the plowing will begin. Your tractor will daily need gallons of fuel and its ration of oil. Gargoyle Mobiloils when used as specified in our Chart of Recommendations mean dollars and cents saved because they mean gallons of fuel and oil saved. At the height of the season, time is of utmost value.

The tractor which unexpectedly breaks down eats up money. Men lose time. Repairs and parts must be paid for. The delay itself often affects crops. The correct grade of Gargoyle Mobiloils helps your tractor

to stay in harness when you most need it.

Cheap oils are a waste of money. True, they cost less. But the poor lubrication they supply is often a vital factor in shortening the life of machinery. Cheap oils steal the power your tractor needs for pulling. They cause mostly breakdowns and excessive repair bills.

In hundreds of public and private tests Gargoyle Mobiloils have shown a saving of oil from 50% to 70% and a fuel economy from 17% to 25%. The Vacuum Oil Company was the first to supply petroleum lubricants to automobiles and has ever since been recognized as the leaders in the science of lubrication throughout the world.

Gargoyle Mobiloils will give you utmost economy in the lubrication of your most valuable equipment—tractors, trucks and automobiles.

At the end of the year this means a tidy sum of dollars and cents saved.

The chart shown here indicates exactly what grade of Gargoyle Mobiloils will give you best engine results from your tractor.



Mobil oils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

DOMESTIC
BRANCHES:

New York
Boston

Philadelphia
Pittsburgh

Detroit
Chicago

Minneapolis
Indianapolis

Kansas City, Kan.
Des Moines

VACUUM OIL COMPANY

*Specialist in the manufacture of
high-grade invariants for every kind of machine.
Obtainable everywhere in the world.*

NEW YORK. U.S.A.

The AMERICAN THRESHERMAN and FARM POWER

VOLUME XXIII.

MADISON, WISCONSIN, MARCH, 1921.

No. 11

Advice in Choosing Tractor Implements

By ED. HENRY

WE purchase a tractor because we expect to get more work done with it than we can obtain with draft animals, but whether we do this or not depends a great deal upon what sort of tools we equip it with. Implements or machines for use behind tractors are built heavier and stronger than horse-drawn implements, and differ somewhat in design from horse-drawn equipment, therefore it will pay the tractor owner to learn just what points to look for in buying his equipment, in order to enable him to become successful in his ambition to get more work done. To such persons the tractor is most likely to prove a paying investment; to others, not so careful or so well-informed, it may prove otherwise.

Much of the tractor's prestige is due to its success in plowing, therefore our first concern should be to learn what points to look for in a good tractor plow. To do satisfactory work, such a plow must incorporate four essentials in its make-up.

First, and most important, is a safe margin of strength. To stand up under service behind a tractor, a plow must be built exceptionally sturdy and strong in all its parts, with a safe margin above any strain that is likely to be imposed upon it, as a failure or break-down means extra expense and delay in getting the fields in shape for seeding. Usually such a delay is likely to be felt the entire season; often an accumulation of losses are directly traceable to a break-down which a little knowledge or foresight in choosing the offending implement could have avoided.

Next in importance is the question of simplicity. The heavy tractor plow should be equipped with a power lift device that does not easily get out of order. There should be no complicated or delicate mechanism likely to give way and cause trouble under the strain of hard plowing conditions.

Another item of importance is that of convenience. No farmer wants a plow that is difficult of adjustment to different soil conditions, for this makes it unhandy to operate and a frequent source of trouble. The plow should be equipped with conveniently placed levers, making adjustment possible without stopping.



This Spring-Tooth Harrow Is Doing Fine Work Behind the Tractor.

The plow should also have ample clearance, so as to permit effective work under difficult field conditions. When working with a horse-drawn plow we can see the trash or rubbish as it catches and accumulates, removing it when necessary. With a tractor plow it is different; most of our traction is focused on the machine, and in many tractors the plow bottoms are entirely outside the driver's range of vision. Hence, as most farmers have trash-covered ground to plow at one time or other, it is well to keep this item of suffi-

cient clearance in mind. Farmers having sticky, gummy gumbo or difficult prairie soils to handle require a disc plow which can also be used to advantage on old or stubble fields. They likewise will be found desirable for deep plowing. In looking for a tractor disc plow, one giving ample penetration without excessive weight should be selected. The newer tractor disc plows show improved principles of construction which enable them to work successfully in soils formerly impossible for them. The discs should be easy of adjustment, while the rear furrow wheel and axle should be sufficiently strong to guarantee a long-lasting plow. The last mentioned is a very important feature, as the parts named must withstand the heavy strain imposed on them, created by the excessive pressure of the soil against the discs.

The position of the scraper blade is another feature of the disc plow construction that is important. Practical plowmen know the proper working of this implement depends to a considerable extent upon the position of the scraper blade against the disc. It is even more so on the tractor type, therefore the blade should be easily adjusted so it sets on the disc at the right point and at an angle which turns the furrow slice to the best advantage. The bearings are of major importance, as a tractor disc plow has little permanent value without high grade bearings. They must have three essential requirements, light draft, strength and long service.

In choosing a disc harrow, ease of handling is very important. In power farming, lost time runs rapidly into money, and the best implements to select are those that can be worked day after day without time-consuming stops necessary to make adjustments. A disc harrow should be capable of being easily changed from transport to working position and back again. Its lubrication is of high importance as its useful life depends largely on ample and well-lubricated bearings. A spring harrow should be selected with the idea of properly supplementing the work of the disc harrow.

With tractor equipment to prepare his land, the farmer should also have the seeding implements to enable him to sow it quickly and economically.



This Disc Requires Weights in Order to Make It a Good Tractor Implement.

Why My Boys Stayed on the Farm

By An Iowa Father

LATELY I have read several articles in The American Thresherman and Farm Power by threshermen who were some years in learning their threshing costs and profits. I want to write about how farm power methods paid big dividends for me, not alone in money but in something that meant a lot more to me: in keeping my boys satisfied with home work. Perhaps my experience may help some farmers who don't realize all there is to be gained from farm power machinery.

I have seven boys. This may seem like a lot to a farmer with a small family, but to Maw and me it seems like just enough. We have one girl, who is married to a neighboring farmer. She is a good girl and just naturally raised herself. The boys are good boys, too, but raising them was more of a problem, and Maw and I have spent many serious hours talking over plans for them.

Lately I have read some stories that usually sound like this: "How to Keep the Boys on the Farm." Some of them have titles such as "Getting the Boy Back," which would indicate that the boy is already gone, with chances in favor of his staying gone.

These stories rather imply that the boys have suddenly, for the first time in history, decided to leave the farm. This is not the case. When I was a boy, forty years ago, I thought a lot about leaving the farm. While my arms and legs were busy handling the awkward walking cultivator of those days, my mind was busy planning the great things I'd do when I had a chance to shake the farm soil from my feet.

I was a little immigrant, in those days. I couldn't speak English without being laughed at, and that made me slow to leave my parents.

I had been old enough, before leaving Germany, to realize that, as peasants there, we had small chance, no matter how hard we worked, to save enough money for the purchase of a real farm. Over here it was different. While we had several bad early years, when corn was worth next to nothing, we had plenty to eat. Each year we had more hogs and cattle.

These things combined to make me satisfied with my farm life. We had never asked for many comforts and were content with the plainest sort of food. We felt independent, compared to the old life in Europe, and we knew we were getting ahead. Thus my old longings to leave the farm wore off.

The biggest reason for my staying on the farm was that I really loved my parents. When times were hard, they never abused me because they were feeling bad about conditions in general. My father would not put me at some hard job and then go to town for an easy ride. We often worked together. When we worked apart, he would do the hardest work and give me the soft snaps. It was partly as a result of his hard work, in all sorts of weather, that he died while I was still a young man.

As I was an only child, I felt a terrible loneliness after he was gone. My mother was then my only pal.

Hard as this experience seemed at the time, it taught me something that my boys have profited by. My father had treated me as a younger brother and partner in this farm business. I saw that by doing the same thing with my boys, they would feel more attracted to farm life.

While still quite young, I married the daughter of a neighbor—an English girl she was, and during the late trouble between England and Germany, we were such good Americans that neither gave the other a chance to start an argument. Soon after we got married, my good mother, who had made her home with us, went to join my



father, and Maw and I had to raise our family without help from the old folks.

At this time I owned the one hundred and sixty acres on which my father had made the original payment, when coming to Iowa. I was a sturdy young man, above average in size and strength and, for those days, I was "well fixed." I was not afraid of the future; yet had I known I was going to be a father to seven boys, I might not have felt so confident!

Luckily, we get time to learn while children are growing, and, believe me, it pays to learn. I wasn't always asleep when my eyes were shut, while those boys of mine were little. I was busy listening to their prattle, wondering if Maw and I and the farm would satisfy them, when they got bigger.

This story wasn't started as a family history, so I'll pass over the boyhood days. It was about the time my oldest boy was fourteen that I began to put some ideas into practice.

I knew that the reasons which had held me to the farm, at that age, wouldn't hold him. He could talk English as well as anyone. He knew some boys in a rapidly-growing manufacturing city, eight miles north of us. He had never seen how hard conditions were elsewhere, as I had in the "old country," so no feeling of thankfulness would keep him happy. He would stay with us only so long as he liked us and the farm.

I recalled how my father had made me feel as if I was working *with* him instead of *for* him. I decided to do more than this and have my boy working for himself. That spring I set aside a ten-acre field and told him that it was to be his field of corn. I charged him for the seed and the time on the teams; and when the crop was sold, that autumn, he got the balance after paying expenses.

I followed this system with my other boys. In those days there were no corn clubs or pig clubs. Some of my neighbors thought I was setting a dangerous precedent. I imagine they were afraid their boys would want some profits from their farms, after hearing what my boys were getting.

My original plans hadn't called for seven boys. About the time I had three boys wanting a share or a field, with the younger lads coming on fast, I decided to buy some more land.

Land in our section had risen greatly in value. I had known the time when it was worth about fifty dollars an acre, so I was sort of fearful over the rising prices. All of the country was being farmed when I arrived in our section. Mostly the land remained in the same families, but occasionally an old couple, without children, or whose boys were going in for medicine, or school-teaching, or something besides farming, would rent or sell out and move to the city.

To get more land, in a section such as ours, I had to keep watching for possible sales. I have been able to buy several places adjoining mine. Last year I paid the record price for land in my immediate neighborhood

when I gave eighty thousand dollars for two hundred and forty acres of land just north of my old home place. I had to bid against a field of men eager to buy it, and only the thought of my big family of boys made me pay such a price. When I came here, as a child, my father could have bought all the farms from here to the county seat for that amount in hard cash.

Before buying this farm of two hundred and forty acres, I owned four hundred and twenty acres. I had, some years ago, tried to portion out this land so each boy could have some land of his own, as he became of age.

As one boy after another reached twenty-one, I found this was going to be a wasteful system of farming. The boys all lived with Maw and me (up to date not one has showed any signs of getting married!) yet each one thought he ought to have his particular cultivator, mower and binder.

Farm machines were becoming very expensive.

(Continued on page 51.)

The Best Speeds for Tractor Plowing

By F. H. SWEET

WHENEVER a practical plowman gets down to hard facts and deep thought on the subject of plowing speeds, there are almost sure to be two considerations which stand head and shoulders above any others which can be brought up. The first one is the effect of speed upon the life and safety of the outfit, and the second is the effect of different speeds upon the quality of the work done. There are some districts, for instance, where tractor plowing is almost suicide for both tractors and plows, because of the prevalence of boulders or "hard heads." Again, we find land that can be plowed with tractors, but there are hard heads enough present to make any fast movement perilous to the outfit; while in some districts—happy thought—there are no obstructions; only long, level stretches of black soil prevent a plowman from moving just as fast as he may care to go. In such cases, the speed at which we may plow the ground is controlled only by the quality of work and the power of the engine pulling the plows.

There is a great deal of misunderstanding caused by the fact that many of our 10-20 engines are sold as three-plow tractors, while other engines, also 10-20's, are rated as two-plow machines. At first sight something seems to be wrong, but when we consider that if the three-plow 10-20 moves at two miles an hour, while the two-plow moves at three miles an hour, we find that, all other things being equal, when the day is over, both have done the same amount of plowing. After all, one of the things we ask first, when we consider plowing speeds and the number of plows an engine will pull, is: "How many acres will this particular outfit turn over each hour or each day?" How many plows an engine pulls is a secondary matter.

We must, however, go further than this. While the number of acres turned over may be the same, what has been the effect of the day's work upon the two engines? We find that the two-plow tractor must travel three miles to every two miles of the three-plow machine. Now, if the life of an engine, a wheel, a gear, a drive chain, or a bearing can be measured by the number of working revolutions possible, then the two-plow high speed machine is the shorter lived of the two. We must not forget, however, that the three-plow 10-20 is likely to be the heavier machine, and that the amount of dead weight moved per mile does much to balance the score piled up against the small engine on the speed question. Giving the lighter, faster engine everything we can in the way of credit, the consensus of opinion among practical men seems to be that the three-plow outfit has a better chance for a long life of usefulness than the faster, lighter engine.

When we come to ground in which we are liable to strike an occasional boulder, everyone knows that three miles an hour is a faster speed than is healthy for either plow or plowman, whether drawn by horses or an engine. True, the outfit is equipped with breaking pins or automatic "un-

hitches," but when we have been obliged to lose good, long days waiting for a new plow beam to replace one which was bent before the pin broke, or when we have had the pleasure of digging deep into our jeans to pay for the broken points which

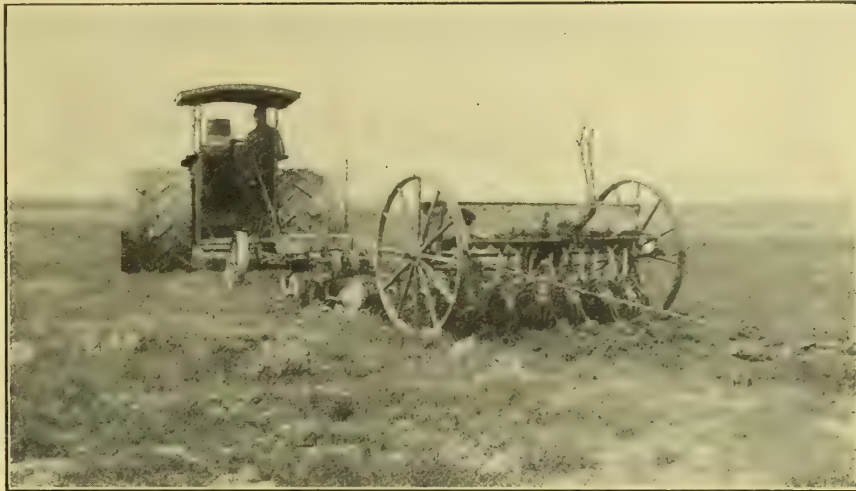
by all good plowmen in a plowing job. A well-turned furrow, a well-packed furrow, trash well buried, and good granulation of the furrow slice are a few I shall mention.

Because the champion plowman in a plowing match crawls along at a snail's pace when he does his best work, it does not mean that it is impossible to do good work at a higher speed; yet all experienced plowmen will admit that the plowman who "lets his team out" is not doing A-1 work. The same is true with a tractor plow. As soon as the speed of the plow becomes great enough to throw the furrow from its mold-board, instead of pushing it over, the appearance of the work is impaired. When a jointer is used, the slice cut by it should be laid over in the furrow in the form of a ribbon. With proper adjustment and drawn at a proper speed, this is possible, but no matter how good the adjustment, once a certain speed is surpassed, the jointer slice is thrown into the furrow in lumps or heaps and the furrow slice following cannot possibly present an even surface under these conditions.

When an engine runs with one wheel in the furrow, the steering of the engine is a comparatively easy matter at even a three-mile clip. When an engine runs on top of the ground, the operator who plows a straight furrow is indeed a busy man.

A good connection between the furrow slice

(Continued on page 57.)



At What Speed Is He Plowing?

HERE is a picture of our outfit at Rudyard, Montana; it consists of a 16-30 tractor pulling four fourteen-inch plows, a six-foot drill and one section of harrow; we are plowing and drilling flax at one operation. At present I am in Detroit, Michigan, but I hope to be in Montana again in March to put in my 1921 crop. H. T. BLISS (a Montana reader).

were snapped off when a certain boulder intercepted our progress, we feel sure that we were going too fast for safety on stony ground. Almost every tractor man will agree that the worst breaks occur when the speed is greatest—and breaks cost money.

There are a few outstanding qualities demanded

The Tractor Chisel

IN California the farm tractor has been instrumental in introducing a new line of farm implements. Many of these have to do with the deeper and better tillage of the soil.

Important in this group of modern implements is what is known as the tractor chisel. This invention is intended to deal with dry, hard, or baked soil, and is especially adapted to the conditions existing under California's rainless summer.

However, they may be made extremely efficacious in any section or any climate. They may be used to an advantage on stubborn stump land, "turfy," burned, weedy, bushy or brake lands.

They are made strong enough to stand the strain of the most powerful tractor, say a 75- or a 90-horse power engine, which has a net horse power at the draw bar of 35- to 40-horse power.

The tractor chisel is patterned much after the ordinary cultivator, only it is powerfully framed out of the best quality of Bessemer

steel. There are nine standards to the tractor chisel, set twelve inches apart, giving the implement a total cut of eight feet wide.

It will penetrate and break up ground that an ordinary plow will make no impression upon whatever and do this to a depth of twelve inches.

Many places in California the tractor chisel is used instead of a plow. With the big farm tractor and this implement the farmers are not compelled to wait for the fall rains to soften their baked soil, but can go ahead and break the soil as soon as the crop is off the ground. The soil is then in good shape to receive the first fall rains.



In California, Chisels Often Replace Plows

Growing Seeds for Farmers

By F. I. FARRINGTON

AMERICAN farmers are now much more independent of the European countries for their seeds than they were in the past. Probably they never will buy so many seeds abroad as they did in 1914, because foreign labor is no longer as cheap as it used to be; although adverse exchange rates for several years yet may stimulate this trade.

Certain kinds of seeds, such as cauliflower and celery, are decidedly "finicky" about the conditions under which they will mature properly; yet the American continent, with its wide diversity of climate, soil and moisture conditions, can grow, somewhere or other, practically all kinds of seeds, and, for that matter, most of the bulbs.

Of course, a certain amount of seed growing has always been carried on in this country. When the country was first settled, the only supply of seed available was that which was brought from "across the water." Naturally the settlers saved their own seed after the first few years, but it was impossible to have any widespread distribution because there was neither a postal nor an express service.

In 1775 the first New York City postoffice was established, and after that the mail passed every two weeks between New York and Boston. Post riders soon after continued their route as far south as Savannah, carrying both letters and packages. This system had hardly been inaugurated before various farmers began to exchange seeds. Soon one or two men saw the policy of starting the seed business, and from this humble beginning the industry has grown to its present enormous proportions, with ramifications reaching to all parts of the world.

At the beginning Boston was the center of the seed industry, and it is interesting to note how the business has gradually crept across the continent, by way of New York City and Philadelphia, until now some of the largest seed establishments in the world are in the western states.

It is a matter, too, of special note, that some of the names earliest associated with the seed trade in America are still found among the largest advertisers, with members of the same family still in charge. As far back as the opening of the nineteenth century, Grant Thorburn in New York and David Landreth in Philadelphia were carrying on a seed business, and both of these names are still common in the seed world. In his autobiography, Thorburn says that he began his business by buying out the stock of one George Inglis for fifteen dollars. Thorburn was the first to issue a catalogue in pamphlet form, the date being 1852, and the tiny little booklet which he got out was the forerunner of the large and handsome catalogues of the present day. These catalogues, together with the facilities offered by the mail service, have been the chief instruments in developing the country's seed business.

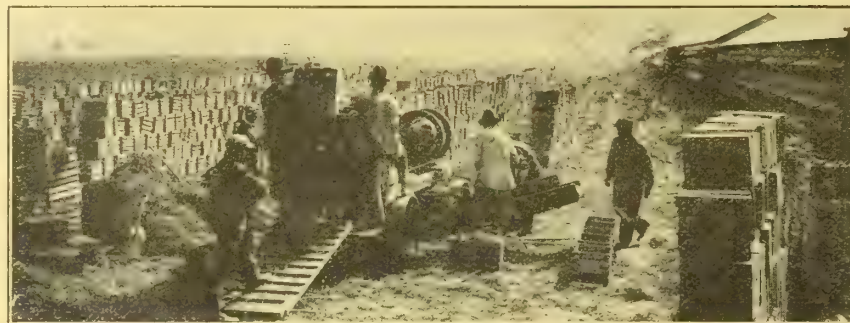
In 1878 there were only seven thousand acres devoted to garden seeds in all America, while the last census before 1920 showed five hundred and ninety-six seed farms, with a total of 169,850

acres. Undoubtedly the present census returns will show a much larger acreage than these figures. Even they, however, will not disclose the actual total area given over to seed growing, because it is the custom of many firms to contract with farmers for the production of certain seeds as a side line.

There are really two distinct branches of the seed business. One is the men who grow and deal



Lots of Canvas Is Used in Threshing Radish Seed.



Onions Are Topped with the Aid of Engines.

in grass, clover and similar seeds; and the other is those who specialize in vegetable and flower seeds. It is the latter seeds which have been imported most largely from across the water in recent years. Different parts of the country seem especially adapted to the growing of certain seeds. Probably Michigan produces more seed beans than any other state in the Union, although a great amount of seed also comes from western New York. Wisconsin, New York and Montana are famous for their seed peas, and for a long time the Connecticut valley produced a great proportion of the onion seed sold. Now California and various western states grow much larger crops. California growers in particular do not have to face some of the difficulties which are encountered in the Connecticut valley, where long continued rains sometimes come at the most inopportune time, making it difficult to dry the seed.

Millions of dollars have been invested in the industry, and an army of men is employed to carry on the work. It is a business which pays well, as a rule, although it is by no means a royal road to wealth. Sometimes there are disastrous failures. A few years ago, for example, one Hiram Sibley, a millionaire contractor, undertook to enter the seed business on a large scale, and lost nearly a million dollars before he was ready to give up. Another millionaire made an equally disastrous failure in San Francisco.

One very encouraging feature of the business is the fact that seedsmen are now much more particular about the quality of their products. This is a matter which requires the utmost care, and even at the best it is impossible to prevent mistakes at times, for many seeds look very much alike, and carelessness occasionally creeps in, no matter how well trained a force the seedsman may

have. On some occasions downright vindictiveness is responsible for a bad mixup. Such an instance has been reported from France. It seems that during the war an employee in the mail house of one of the biggest French seed concerns acquired a grudge against the management. Possibly he was an alien sympathizer. In any event, he deliberately mixed a large amount of seed, so that buyers found themselves with varieties wholly different from those which they had ordered. This, of course, resulted in a vast number of complaints, and badly damaged the reputation of the firm until the real cause of the trouble was ascertained and made known.

Many of the seed growers maintain trial grounds where they test out new varieties. Probably the Fordhook Farms, near Doylestown, Pennsylvania, are the most famous trial grounds in the country. As many as one hundred and eighty-five varieties of sweet corn and two hundred and forty-three varieties of tomatoes have been undergoing tests there at one time.

Seedsmen are constantly trying to improve the quality of their products, and among them are men who have done almost as much for the nation at large as has Luther Burbank, even though they have attained less fame.

C. N. Keeney, Le Roy, New York, is an example. It was Mr. Keeney who gave the world stringless string beans. As everybody knows, string beans a few years ago were provided with real strings that were forever getting snarled around one's teeth. Mr. Keeney realized the faults of the string bean, and undertook to correct them. He spent days crawling about the fields on his New York farm, trying to find a bean without strings. After a time a plant was discovered which bore such beans. It was marked with a handkerchief and the search continued. Finally a few more plants were found and seed from them was saved to be planted the next year. This process was kept up until eventually enough seed had been obtained to be put on the market.

As in every business, there are some men to whom a reputation for fair dealing is a matter of little consequence. All they want is the cash, and they care not how they get it. It is such men who buy up waste from canning factories and separate the seeds, which they sell to the unsuspecting public. Of course such seeds are almost certain to be badly mixed, and the buyer may get several varieties from one package. Moreover, seed obtained in this way is likely to germinate poorly. The Pennsylvania Experiment Station planted six varieties and found a variation in yield amounting to as much as thirteen tons per acre.

Then there comes the temptation to sell old seed which has been left over from the year previous. This is all well enough with such kinds as cucumbers and melons, which are even better if a few years old, but it is a fatal practice when applied to short lived seeds, like parsnips, which never give the best results if they are more than eight months old. One prominent seed house

(Continued on page 58.)

Handling Lime with Farm Power—*By Earle W. Gage*

MODERN farm power machinery has removed lime and limestone methods from the time of our grandfathers, when drudgery characterized the various operations necessary for its preparation for the soil. The farmer who already has the power, can, with one of the crushers, pulverizers and screens, convert raw marl or limestone into food for soil at comparatively small expense.

Over a wide area of the country are vast stores of this material, which at little cost, and at seasons when labor is available, can be handled. This will not only save for the farmer the profit going to the distribution of the commercial limes, but will also solve the transportation and high-freight expense problems.

There are many sections where marl beds of varying purity are located, and these can be worked at reasonable rates. Where this material is in such a condition as to need no grinding, it may be applied to the land and answer every purpose that the most expensive, artificially-prepared forms of lime would serve.

Much will depend on the grade of material, the marls varying from deposits little richer than a limy soil to a material practically as pure as high grade limestone. In some rural communities are sources of power, such as windmills, which are only used for a portion of the year. Nearly everywhere are to be found tractors of proper power facilities to operate lime grinding outfits, which further lowers the cost of the material.



A Pennsylvania Limestone Pulverizer.

Lime such as we commonly use on our farms includes both carbonate of lime as found in ground limestone, marl beds, and shells, and the oxide of lime, which is the carbonate after it is burned and the carbon dioxide has been driven off by the action of heat. Dolomitic limestones, which contain both calcium and magnesium carbonate, may be used as a source of material for small farm plants in about the same manner as the calcium limestones. In most cases it will not pay to produce agricultural lime from a poor grade of limestone.

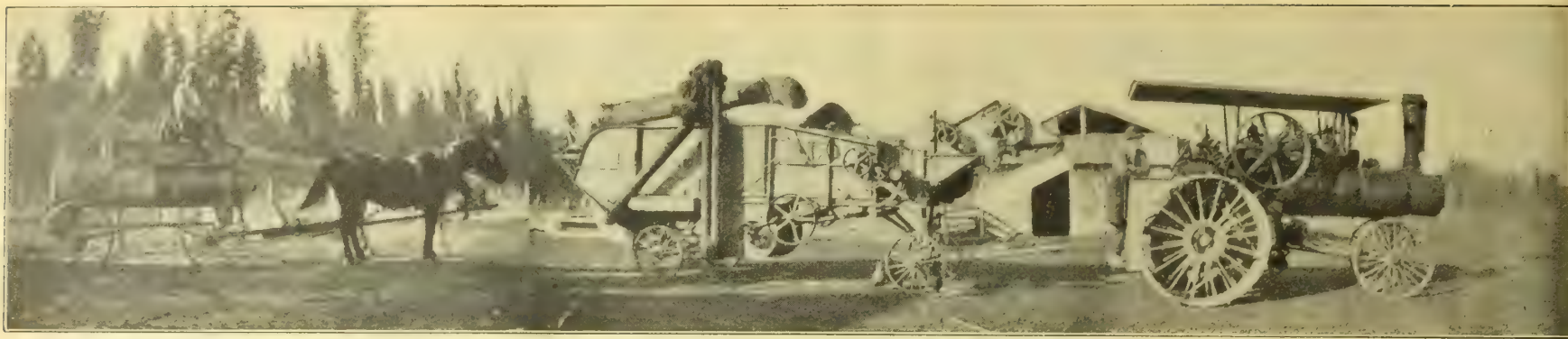
With a source of limestone or shells available, the farmer has a choice of either grinding the material finely and using it in the form of carbonate or burning it and using it in the form of oxide or quicklime. In the pioneer days of the country, the burning process was the only one employed, but at present ground limestone is more popular.

When limestone is burned it loses about two-fifths of its weight, and the efficiency of the material for soil improvement is not changed at all. The twelve hundred pounds of caustic lime still has the same power to neutralize soil acidity as the one ton of finely ground limestone. True, there is less material to handle, but the cost is much greater. The ton of limestone costs two dollars, while the twelve hundred pounds of caustic lime produced therefrom costs about five dollars. For the treatment of the eighty-acre farm only ninety-six tons of caustic lime are now required, but the total cost is \$768. The handling of the extra sixty-four tons of material in the finely ground limestone is made with a saving of \$448 in cash, or seven dollars per ton, which is certainly sufficient compensation for the extra work.

(Continued on page 58.)



A Handy Portable Machine Which Uses a 12-25 Tractor as Its Power Unit.



A Washington Rig Whose Owner Has Made It Pay. Read His Advice.

Advice to Fellow Threshermen—*By a Pacific Coast Man*

I WISH to congratulate the thresherman who wrote an article in the November issue of *The American Thresherman and Farm Power*. If there are some of the "boys" who have not read this article, entitled "How I Made Threshing Pay," they had better look it up and read it carefully. I must say that this man has *rare good sense*—I don't say *common* sense, for we all have this, to some extent. As one gets older, he is apt to stay right in the same old rut, instead of seeking more knowledge. It is the rare man who pulls himself out of the rut.

I should like to shake hands with this man and tell him that he and I figure out the threshing game in the same way. I have been in the threshing business for eight years. The writer of the November article started to keep books at the end of his fourth year, while I started out on my first year. At the end of each season, I know just how many bushels I have threshed of wheat, oats, barley, timothy and rye; what I charged, what my oil and repairs cost, my labor bills, and the value of my own time from the day I started out until I "hung up" for the winter. I have figured, each fall, what it costs me to do my repair work. I charge for my own labor at the rate of four dollars a day; I then add running and labor expenses—my own included—and subtract that from the full amount; this gives me what I made for that season. You can figure your interest on the money invested, taxes, and depreciation of the machinery, then subtract that from what you have made on your season's run; this will show you your clear profit.

It is quite a satisfaction to be able to refer to your books, when in doubt about anything. I never give advice unless I am asked for it; and I then give it to the best of my knowledge. I am able to do this because I have taken time to compile my records. I'm not guessing about costs.

The man who transacts business with a customer, then sticks his money into his pocket with never a thought of putting it down on his book, will never make much of a success in business. The pocket is a handy place, but the best place is a good bank, on a checking account; then when you draw the money out, you can see at a glance just how much you have and what you have spent. Especially is it handy if your "better half" should call you down for spending too much on fox-hounds, guns, fishing tackle, auto tires, etc. I am not bothered in this way, however, as my wife is a good sport and loves to fish, hunt and drive the car.

The man who wrote the article, "How I Made Threshing Pay," has done something that I seldom ever do: that is, to go around beforehand and engage crops. I have discovered that men are an awful bunch of prevaricators. On pulling out from a place, after finishing a job in the fall, I

have had some say to me, "Well, kid, you have done a good job, and you did it fast. Your machine is a dandy, and if you are in the game next year, you may have the job." When the next threshing season draws near, I get my machine in Number One order and figure on a big run. Then along comes the same man who had made such wonderful promises last year, and says, "Well, Mr. so-and-so is coming in with as good a machine as yours, and only charges three cents. If you will cut your price, too, the job is yours. You can thresh me a bit cheaper than the other fellow, and I have three or four thousand bushels. This is between you and me." Now I know all about that part of the game. This little message would soon travel faster than I could think. This is only *one* case. I could tell you of dozens of similar cases—only a little worse. I certainly cannot depend on every man's word. It goes in through one ear and out through the other.

I am sorry to have to say that the average thresherman has no more science or gumption than a schoolboy. When you try to convince him how we can better things along some line and how to coöperate so as to charge the same price, he will stand there with both ears cocked, clapping

his "chops" about with a half-pound of tobacco. Then when you finally ask him what he really thinks about it, he will say, "I guess I will stay by the old prices, and you have the same right, too, if you wish." A very intelligent answer, is it not? When a man talks like that, it is a sure sign that there is nothing between his two ears but *cavity*, and if you will notice closely, that kind of a fellow has heavy shoulders and a peaked head. This kind, as a rule, likes to hear the hum of the machine and likes to get all the grease and dirt he can find. Now, boys, grease and dirt are no disgrace; when you run a separator, you cannot expect to be clean. But I think I would be an awful *chump* if I should run around the country threshing, wearing out machinery that cost three thousand dollars, and at the same time making just enough to buy oil, pay my labor bills and keep me in tobacco.

I hope Uncle Sile lives forever, for we surely cannot get along without him. I hope he prints this advice of mine, to the brothers everywhere; that if in these days of business methods there is any thresherman who doesn't keep books for his business, he had better get busy at once. It is the key to success.

For Higher Yields of Grain

By F. B. NICHOLS

THE yields of grain are much lower in the Mississippi Valley—the bread center of the world—than they should be. Every thresherman knows this from experience on jobs where the grain for which he gets pay is much less than the amount of straw passed through the separator would indicate. These low yields are with us despite the fact that the methods of seed bed preparation are much better than those of ten or fifteen years ago.

Doubtless the necessity for larger yields will be considered more carefully in the next year or two than they have ever been before. It is well that they should be. A readjustment in farming operations is coming now, in which agriculture is going to get on a definite after-the-war basis, and in this the soil fertility needs of the country can be considered carefully. A permanent agricultural system can be developed if farmers will keep the soil fertility needs in mind.

Good progress actually was being made in many communities in the developing of a permanent agriculture when the war came, and knocked out all of the established agricultural practices. There were many sections in which most of the farmers had a fairly good crop rotation, with a big place for the leguminous crops, such as alfalfa and the clovers, and an efficient

system of livestock production. But the war, with its huge demand for grain, and especially wheat, came, and this upset the usual farm methods. The big, immediate thing was to win the war, and the way the American farmers responded to the demand for these huge grain requirements will always go down to their credit. But the war was won—the days of conflict are over. The thing now is to readjust the farming business on a basis so it will be profitable and at the same time provide a system which will allow us to turn over the farms to the coming generation in a condition so they can raise profitable crops.

Probably the most important thing is to get a real crop rotation started—this is especially important in the leading wheat sections of the country; in central Nebraska, for example. There is a huge number of fields on which wheat has been grown season after season for perhaps twenty-five or thirty years, with constantly decreasing yields. Almost all experienced producers know that this is wrong, yet this evil of one-crop farming has been allowed to grow up. Tenant farming has had a good deal to do with it. In any case, it is time that these methods were changed to allow a system which will make higher yields possible.

(Continued on page 54.)



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Threshers

Built in sizes to meet any practical requirement.

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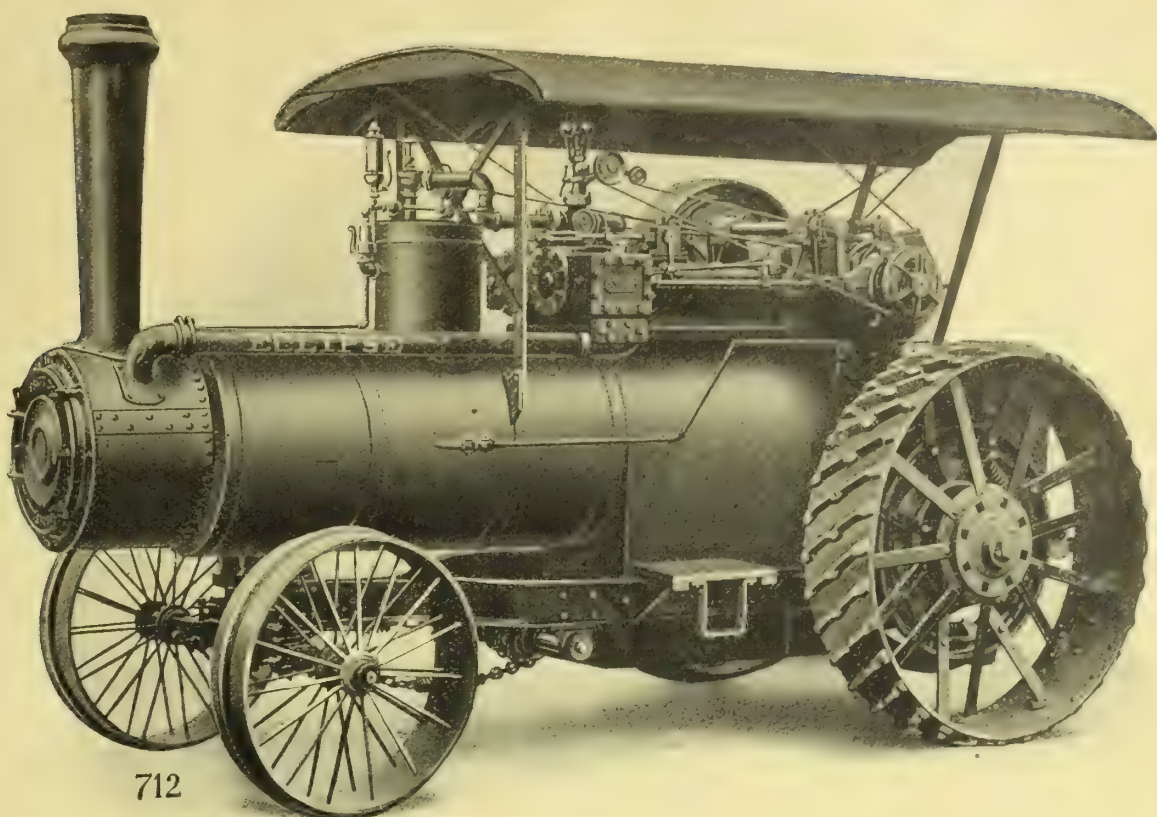
Class rating—15-28.
Drawbar, horse power—15.
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Number of plows—3; 14-inch bottom.
Motor (Beaver)—four cylinder, four cycle, valve-in-head.
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Master gears—semi-steel, 3-inch face.
Driving axle—3-inch diameter.
Main frame—7 inches (12¼ pound) channel iron.
Capacity fuel tank—20 gallons.
Friction wheels—60-inch diameter, 12-inch face.
Guide wheels—46-inch diameter, 5-inch face.
Belt pulley—13-inch diameter, 7-inch face.
Speeds—forward, 2½ miles per hour, and 3½ miles per hour.
Backward, 2 miles per hour.
Length—158½ inches.
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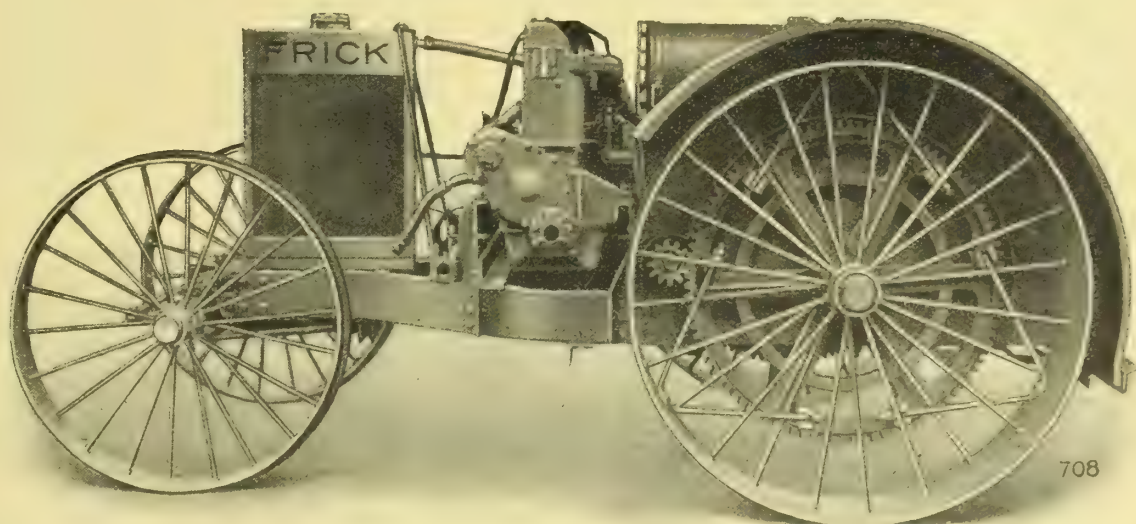
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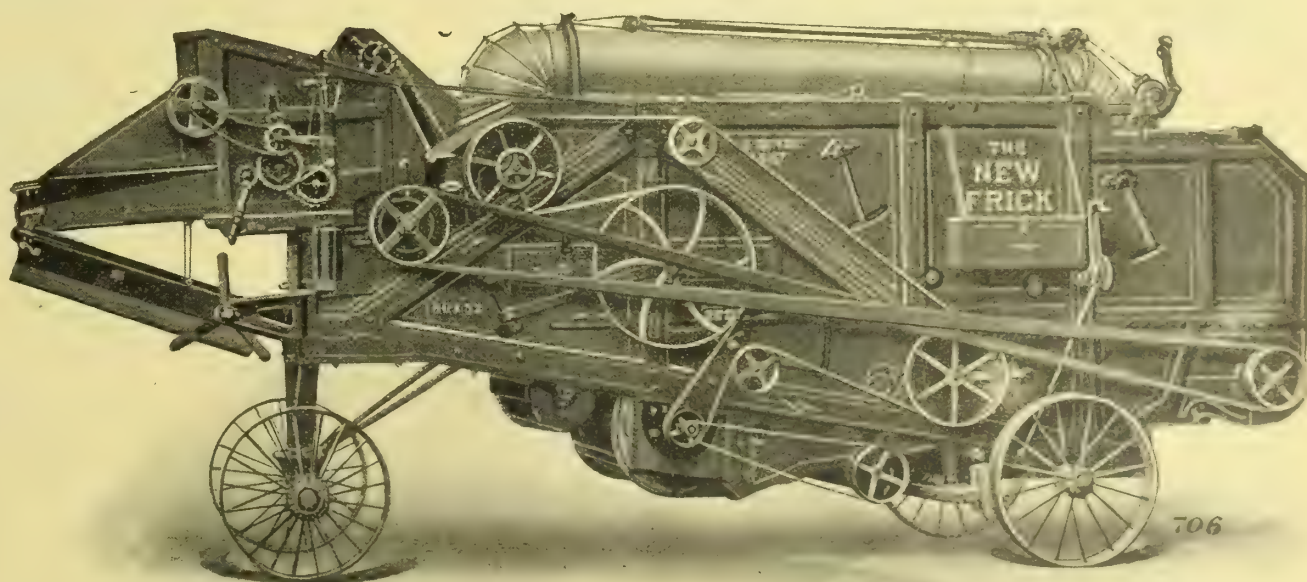
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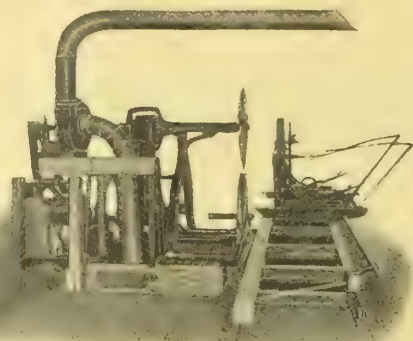
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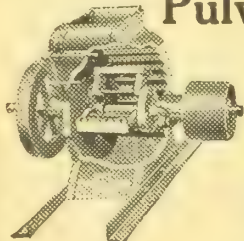
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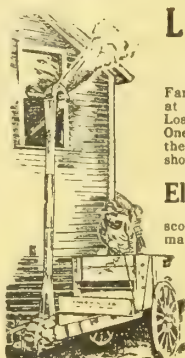
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Fan mill and elevator combined,
at half the cost of an elevator.
Loads into box car, wagon or bin.
One man and gasoline engine does
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Elevates, Airls, Cleans

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Humane Extension Feeder

(Patent Applied For)

Humane? Yes!

Why abuse man and beast by compelling them to stand in the dirt and dust from the old thresher when a long, low-down, high-sided, wide-topped Feeder can be bought that will pay for itself in 2 to 20 days? Carrying heavy loads, all that men can lift on their forks over their heads, walking on soft stacks and straining to pitch it into the center of a low-sided short feeder from which half slides off and has to be repitched, is a thing of the past.

Made in 16-ft. to 40-ft. lengths for any size machine.

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Write for full description and prices today, stating length of extension feeder wanted, width of cylinder and make of self feeder used. Order early and we will be sure to deliver on time.

This is a MONEY line for dealers and agents. Some good territory still open, possibly yours. Write today for agency proposition naming counties wanted.

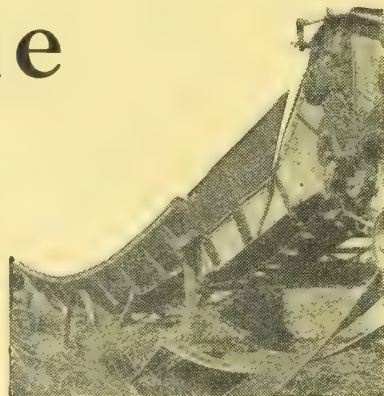
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A 20-FOOT FEEDER



THE SIDEBORDS

Increase the capacity of any Self Feeder and form the attachment for the extension.

Aunt Malinda

FOLKS say about the same thing every time the national administration changes hands. It's like "All-a-man left" before the "All promenade" in the old fashioned square dance. When the new President takes the oath of office and heads the ship of state across the troublesome sea of politics, he finds kinfolks and friends ready to grab his hand and wish him good luck, and incidentally hold on long enough to let him know their addresses in case he feels that the country needs their assistance. Then the grand allied free-for-all knock-down and drag-out for office begins. The incomin' President is simply smothered with friends, job hunters and log rollers enough to materially cut down the waste of production if they were back at the pines diggin' stumps or twistin' the crank of a tractor, and a lot of 'em are better fitted for that job than for "swivel chair patriots," but they don't know it.

Oh, the incomin' President has a world of friends until his appointments are announced and then the fur begins to fly among the disappointed. When Woodrow Wilson first mounted his bicycle eight years ago and, with that Jeffersonian simplicity which wore off long before he'd reached the end of the first lap, because they failed to leave the anodes in the acid bath long enough to have the nickle attach itself to the handle bars of the administration sufficiently thick to wear eight years, folks thought it was mighty democratic in the Chief Magistrate to pedal his own way around the Capitol and poke up Congress for laggin'. But you notice what they had to say about his palatial trains and Cleopatra fleet which he employed after the beginnin' of the second term? Well, there'll be many who will call President Hardin' ugly names before 1929 but they won't be those employed by the government, not on your life they won't. It's the pigs on the outside of the potato patch that squeal, not those on the inside where the "rootin'" is good.

No man in public life ever slipped through the cracks on issues that failed to materialize and got by with it oftener than the tired and broken-down man who has just left the White House with all its flashin' lights and unthankfulness towards its occupants. No man ever stood quite so high in the estimation of mankind throughout the world, at one time, than ex-President Wilson. But alas! He didn't measure up to the opportunities at all times and in all things accordin' to public opinion, as was expected of him, and so, when the end came, it was another case of "The king is dead! Long live the king!"

Many of those who shouted themselves hoarse for President Hardin' in the recent campaign may curse him as they have cursed all of his successors since George Washington. Go back in history less than sixty years and read what they said of Abraham Lincoln, whom they persecuted as the Jews of old persecuted the Son of Man. Fifty years afterwards one of those to whom it could have truly been said, "Et tu, Brute?" said of Abraham Lincoln, as some will perhaps say of Woodrow Wilson fifty years hence, "He was the greatest man since the Son of Man."

They're payin' homage to Warren G. Hardin' now and hailin' him as the business deliverer of mankind, and my prayer is that he may become such and that our fondest hopes and expectations may be more than realized in the fullness of the measure. Eight years hence what will they say of our new President, who has gone into office with a greater majority than any other President received, or what he himself ever hoped or dreamed of receivin'?

We've had many Presidents, most of 'em great statesmen and honored citizens, but did not the people spitefully accuse 'em and strew their path-way with thorns instead of roses, ere they laid down the scimitar and the gavel of authority? What will the harvest be this time is what concerns you and me. We have, to all appearances, a level headed President and a gracious wife, true as the needle to the pole in the affections and affairs of her husband, and I predict that she won't be found wantin' in any sense, and all true Americans wish these two splendid people Godspeed in the heavy task set before them, but what will be the verdict at the close?

Ex-President Wilson has performed many acts durin' his official career as head of the nation, for which we owe him our sincere gratitude. He's given the nation his strength and health and manhood, in return for which we've hardly been as charitable as we should 've been. He's made mistakes, for no man who ever makes any headway avoids makin' mistakes, but with it all should we not draw the broad mantle of charity over his faults and cheer him in his declinin' years for the many good things which he has vouchsafed to us all?

The past eight years have been history makin' years and we've been drawn into the vortex of war from which there was no escape. In most things Mr. Wilson did as well as any other man with the odds against which he had to contend, largely within his own political ranks. Let us hope that eight years from now Warren G. Hardin' can retire to private life with these prophetic words ringin' in his ears: "Well done, thou good and faithful servant, enter thou into the joy of thy Lord."



*Standard for
over 30 Years*

WHEN overhauling your equipment be sure that your worn out belting is replaced by a genuine Sawyer Stitched Canvas Belt stamped with the "U.S." Seal.

For 30 years, experienced power farmers and threshermen have made the Sawyer Belt their first choice for the heavy jobs.

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The American Thresherman and Farm Power

B. B. CLARKE, Editor
V. V. DETWILER, Managing Editor

MARK G. TROXELL, Associate Editor
FRANK M. CLARKE, Associate Editor

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A PAGE WITH THE EDITOR

THE settling down process in the business world is more speedily obtained by the settling up process.

Of course there may be bigger fields of usefulness than that of the thresherman but for ourselves it's like Riley said about the little town of Tail Holt, "It's good enough for me."

NEVER before in any previous year has the general attendance at state conventions of threshermen been so large, or has so much interest been taken in the proceedings as in this year of our Lord, and Warren G. Harding, 1921.

THE selection of this publication as the official organ of the brotherhoods of the various states simply means the strengthening of the organization, as it induces many who do not read their own publications to do so, and when you can get men to read you need not fear results.

THE editor was glad to see the cheery face of Uncle Billy Prisk at the Wisconsin convention. Uncle Billy may not agree with us in many things but he's a good old scout and we realize that he has been an earnest worker for organization, even though his ways have not always been our ways.

THERE is one suggestion to those state organizations which have not as yet adopted the name "brotherhood," which may not have been considered. It shows a solid front with the best name that could be given an organization. Next to the Fatherhood of God, the brotherhood of man rings out with more meaning than any other name.

AMONG the old land marks of organization is Lee A. Hardin of the Russell Wind Stacker Company, who proclaims the fact that he "fought for organization all the way from Manitoba to Patagonia." Old Lee was in full eruption at Lansing on February 15 and 16. He was the principal speaker at the opening meeting on Tuesday evening and talked to the brethren as in the "wild-cat days" at Wichita.

THOSE brethern who lost their noodles so far as to purchase five hundred dollar an acre farms, instead of investing a few hundred dollars cash in northern Wisconsin land and making a farm and home of their own, have our sympathy indeed, for when Gabriel begins to blow his dinner-horn, the tax gatherer and the interest collector will still be on their trails.

OUT at Lincoln, Nebraska, the home of Colonel Bryan and the Commoner, where a real western broncho-busting welcome awaited them, President W. H. Newsom, of the National Brotherhood of Threshermen, and the editor nearly blew a fuse trying to live up to the reputation which had been vouchsafed them by President J. W. McHarry of the Nebraska brotherhood. When it comes to throwing solid shot and talking United States about their business, and yet in the most courteous manner, old Nebraska is right on the job.

THE editor received such a real genuine heart to heart welcome at the state convention at Lansing, Michigan, February 15, along with "Big" Finley Mount, the tall sycamore from Shanondale, Indiana, on the banks of Sugar Creek, far away, that it warmed the very cockles of his heart. Finley Mount, from Sugar Creek, and Old Sile, from Potato Creek, six miles apart, grew up together but little dreamed that they would ever live to drink Canadian Club from the same bottle or make a spiel from the same platform and tell the Michiganders "Oh how they ran!"

THE annual convention of the Wisconsin brotherhood was an interesting and well attended convention and its deliberations were commendable in every way. While the editor urged that an operating thresherman be elected president, yet the selection of C. C. Doring, who was the choice of nearly every delegate present, insures a bigger and better convention next year, we feel very certain. Mr. Doring did not want the honor, but when tendered as it was he could not refuse, and he will honor the organization as president.

TAKE a look at the picture of the Illinois Brotherhood of Threshermen in the April issue and judge how much advancement has been made among the threshermen in "dear old Illinois." The editor looked these splendid men in the face for over an hour on Wednesday evening of convention week, and nowhere has he found more up-to-date business threshermen and farmers. It was an inspiration to be permitted to address such a convention.

It is most gratifying to realize what a world of progress has been made all along the line among the builders, salesmen and users of threshing machinery and accessory lines. Organization has been the Moses which has led the brethren out of the wilderness, and brought them from the slough of despond to the land of milk and honey, as compared with their conditions twenty years ago, when the voice of one was heard in the wilderness crying for organization.

There was no business in a worse condition than ours, and we were all ashamed to admit that we were identified with the threshing of grain, so unbusinesslike had it grown. The voice of the auctioneer was heard in the land selling the thresherman's all under the hammer because he could not pay. Men, big-hearted men, had their eyes often dimmed with tears, as they were forced to close out a thresherman for debt. It was this or be closed out themselves, for verily the "single-trees" were hitting the heels of the producer as well as the heels of the user, all because chaos reigned everywhere.

No greater proof that we are all bound together and a part of the industry could be offered than the financial standing of the manufacturer of twenty years ago compared with the manufacturer of today. The answer is as plain as the handwriting on the wall at Belshazzar's feast. We were all weighed in the balance and found wanting. Compare the financial standing of the average thresherman of two decades ago and now, and in his prosperity you find the prosperity of the builder and the salesman, and everybody else, and therein is the answer to the whole problem.

Farm Power, and George Allen, Director of the Louisville Convention and Publicity League, made the brothers feel that his city extended a warm welcome.

Professor Welch, of the state university, Lexington, made a fine address, telling how the university is trying to make country life more attractive. He offered the college halls and courtesies to the brotherhood, in case they care to consider Lexington as their convention city. D. R. Higgins, an experienced Indiana insurance man, told of the advantages of modern liability insurance. Indianapolis branch house managers who were present were introduced and proved the adage that any Hoosier can make a good talk. The Louisville branch managers replied fittingly to the Indiana boosters.

Officers elected for 1921 were as follows: J. Van Fletcher, Louisville, president; Chester Adams Campbellsburg, secretary; Delosier Moxey, Louisville, counsel.

Four vice presidents, executive and legislative committees were also elected. It was regretted by all that Joshua Bohannon, long a capable officer, will have duties largely in Tennessee, during the coming year, and for that reason refused to permit his name to be placed in nomination.

The Kentucky meeting was a real success. This fact was largely due to the fine planning of its 1920-21 officers. May the new officers carry on!

Don't forget that two of the biggest conventions are still to come: Iowa and South Dakota. You can count on Brothers Snook and Borne-man to produce "hummers."

The benefits from the fine organization meetings will be felt for months to come. At the recent Michigan and Nebraska conventions, men testified that the hearty coöperation of convention season was what had kept their faith in organization alive.

No organization exists as far west as New Mexico. But times are changing. Time may come when the threshermen will be as well organized in the far west as they are in Indiana. More than four out of every five



The Kentucky Brotherhood in Session at the Tyler Hotel, Louisville.

threshermen in the Hoosier state have learned the benefits of organization.

The Michigan Threshermen's Association held its fifteenth annual convention in Lansing, Michigan, February 15, 16 and 17, 1921. The machinery show was held at the city market; this show has grown larger each year and it looks as though we shall have to find larger quarters to accommodate it by another year.

The meetings were held in the circuit court room, which seats four hundred and fifty persons. We were crowded. Standing room was not available.

Mayor Kyes gave the brothers a hearty welcome, after which Tom Walker of Toledo gave a talk on the Monroe county situation and how it was handled. This was well received. In the evening, N. P. Hull gave a very fine address on the financial and economical outlook. Later Lee Hardin talked on the "Religion of a Thresherman." A general discussion followed each meeting; the forenoons were spent in looking over the exhibits and in getting acquainted.

On Wednesday, the "Relation between the Farmer and Thresherman" was discussed by R. S. Shaw, Dean of Agriculture at Michigan Agricultural College. Dean Shaw explained what a lot of missionary work a thresherman could do among his customers; how he can improve his "run" by telling his patrons where he threshed good, clean seed and where they could procure it.

All the old officers were re-elected, after which W. H. Newsom, national president, explained both the proposed vehicle law and compensation insurance. Mr. Newsom answered a lot of questions for the brothers.

Finley C. Mount talked in the evening. He surely gave a fine

address; one that was well received by all present. The room was crowded at this session. Mr. Mount was followed by B. B. Clarke. Uncle Silas has always said that had it not been for the old Michigan crowd he would not be here today. Mr. Clarke was surely at his best, full of "pep" and wit, and everybody was glad to benefit by his inspiration and leadership. After Mr. Clarke's talk, the

members were given free tickets to a good vaudeville show, where the actors put on a few extra touches for the boys.

The general feeling was that this was our most successful convention. Opinions were expressed that next year's gathering must and will be even better. B. A. DICKEY,
Secretary-Treasurer.

At the Wisconsin convention widely different views were held on the cost of hulling clover. Prices ranged from one dollar to three dollars. Brother Strahl of Richland county said he had seen times when he felt as if it was worth thirty dollars a bushel to do the work.

One thresherman said his first job, several years ago, was on clover threshing. He threshed forty bushels in two hours, received two dollars a bushel, and the farmer sold the seed at the machine, without cleaning expense, for fifteen dollars a bushel. All the brothers agreed that this was exceptional work.

We wish to remind New Jersey readers that the annual Farmers' and Threshermen's Association will be held in Trenton, New Jersey, on Monday and Tuesday, April 4 and 5, 1921. While we are small in numbers, the work is given the same attention as in larger associations,

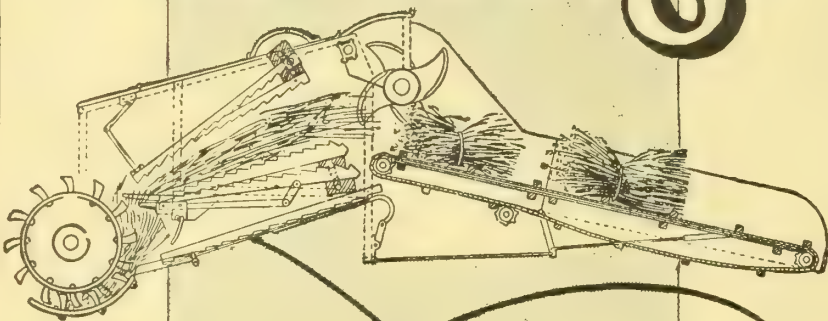


W. A. Swark, Secretary of the South Dakota Organization.



Some Members Traveled Five Hundred Miles to Attend the Wisconsin Convention.

A real aid to fast threshing!



THE threshing season is short at its best. Only a score of days or so and it's all over. It's up to you to speed up your work during that time—to "make hay while the sun shines."

You can do that by perfecting the team work between your feeder and separator—by getting a Garden City Self Feeder.

It's a good investment because it makes possible faster and cleaner threshing, regardless of the grain, and therefore earns more for the operator.

Arrange now for your Garden City so as to be ready when the season opens up. Write us for more information and name of nearest dealer.

Garden City Feeder Co.
Pella, Iowa

Garden City self-feeder

and better feeling is being created among the threshermen by our work. Conditions are much the same here as elsewhere, and we want to make this meeting as big as possible. We are now outlining plans to entertain the boys Monday night in order to give pleasure as well as information to our visitors.

We hope to have with us J. B. Parker, and we have given him an important place on our program.

New Jersey Threshermen and Farmers' Association.

BY S. C. CODER,
Secretary-Treasurer.

A New Mexico man who, with his brother, owns five rigs, says that an organization would be a real benefit to threshermen of his state. Any New Mexico men who feel the same way should get in touch with V. H. Anderson, Roy, New Mexico.

One of the best testimonial letters to reach this column was received from Mark R. Byrd, Crawfordsville, Indiana. This letter was written a month after the Indiana convention, but the events of last January were still vivid in Mr. Byrd's mind. He says: "I shall long remember B. B. Clarke's speech at Indianapolis. I hope he will be with us for years to come. Such a meeting, as we all had there, is an inspiration to any thresherman. We are fighting harder than ever against the Vehicle law. If by any chance it passes, about fifteen hundred of us Indiana boys are going to start at once for that legislature. W. H. Newsom has promised the legislature we'll do just that thing, and Uncle Bill is a man of his word."

"Convention always leaves a scrappy, optimistic feeling among the boys."

If you've been feeling that way, Brother, don't be afraid to write the Organization column. You are among friends here.

Old Uncle Silas made an impressive figure as he led the boys in the Lord's Prayer, at the opening of the Wisconsin convention. (Sile didn't write this, nor did he see it before publication.) Every convention should open with prayer, and most associations can furnish a preacher to do it.

The New York Brotherhood of Threshermen, through H. P. Kellogg, secretary, wishes to extend congratulations to Uri Tracy, a New York state man who was one-time chairman of the legislative committee and always a firm supporter of his organization. Mr. Kellogg writes:

"Mr. Tracy now resides at Bristol, Tennessee, and during the last election he was one of the most ardent supporters of Alfred A. Taylor, who was elected governor of Tennessee. In recognition of these efforts, the

governor has seen fit to appoint our old friend to the position of Major General, a position we are sure he will fill with honor to himself and to the state. We feel sure that we will speak for our organization when we extend our sincere congratulations to Mr. Uri Tracy."

The Nebraska Brotherhood of Threshermen held their eleven annual convention at The Lincoln Hotel, Lincoln, Nebraska, February 8, 9 and 10. Our convention was opened by J. W. McHarry, president. An address of welcome by M. Towl of the Lincoln Chamber of Commerce made us all feel welcome.

A general discussion by W. H. Newsom, C. B. Smith and other members, on the threshermen's law, followed. Mr. Higgins of the Indiana Liberty Mutual Insurance Company was introduced and gave an interesting talk on insurance.

It was moved by Mr. O'Malley, seconded by Mr. Jones, that the Indiana Liberty Mutual be made the official insurance company of the Nebraska Brotherhood of Threshermen. The motion was carried.

At the evening meeting, John R. Myers of St. Joseph, Missouri, gave us a very interesting talk on "Coöperation Between Threshermen and Manufacturers."

Prof. Condron of the University of Nebraska entertained the brethren with moving pictures of "The Resources of Nebraska," showing scenes taken from an aeroplane. Plowing, threshing and other things of interest were shown.

On February 9, the forenoon was spent in visiting branch houses. In the afternoon, President McHarry introduced B. B. Clarke of The American Thresherman and Farm Power, who gave us an inspiring talk; "Sile" promised to "come again." The Nebraska brethren have longed for "Uncle Sile" to attend our convention and hope he may be with us next year. W. H. Newsom, president of the national association, gave us an instructive talk on mutual insurance, also some light on the proposed uniform vehicle law.

The following committee was appointed: Resolution committee; M. H. O'Malley; F. Sharmon; C. B. Smith.

A motion was made by Samson, seconded by O'Malley, to raise our annual dues to three dollars per year. Motion to amend, making our dues four dollars per year, and to include a subscription to The American Thresherman and Farm Power. Motion carried.

The big banquet, given by the Lincoln Tractor and Thresher Club, was followed by vaudeville. In order to give all members an opportunity to vote on officers, the election of officers was held after the

Drive Out Your Boiler Scale



IT'S dead weight absolutely. A tremendous handicap and barrier against a successful run. To operate a steam engine that is badly scaled means a loss of time, an unnecessarily large consumption of fuel and a shortening of the life of the engine.

There are lots of chemically-acting scale remedies. But the trouble is that they're hard on the boiler. So the cure is really worse than the ailment.

U. S. G. Co's Mexican Boiler Graphite is the only sure and safe scale remedy. It is equally effective in any kind of water, works the old crusty scale loose and keeps new from forming. And it does it without injury to the boiler.

The operator who has the joint interest of his customer and his own at heart should include with his equipment a keg of U. S. G. Co's Mexican Boiler Graphite. It will result in mutual benefit to both.

Send us this advertisement with your name and address and we will mail you booklet and other valuable information.

The United States Graphite Company Saginaw, Mich.

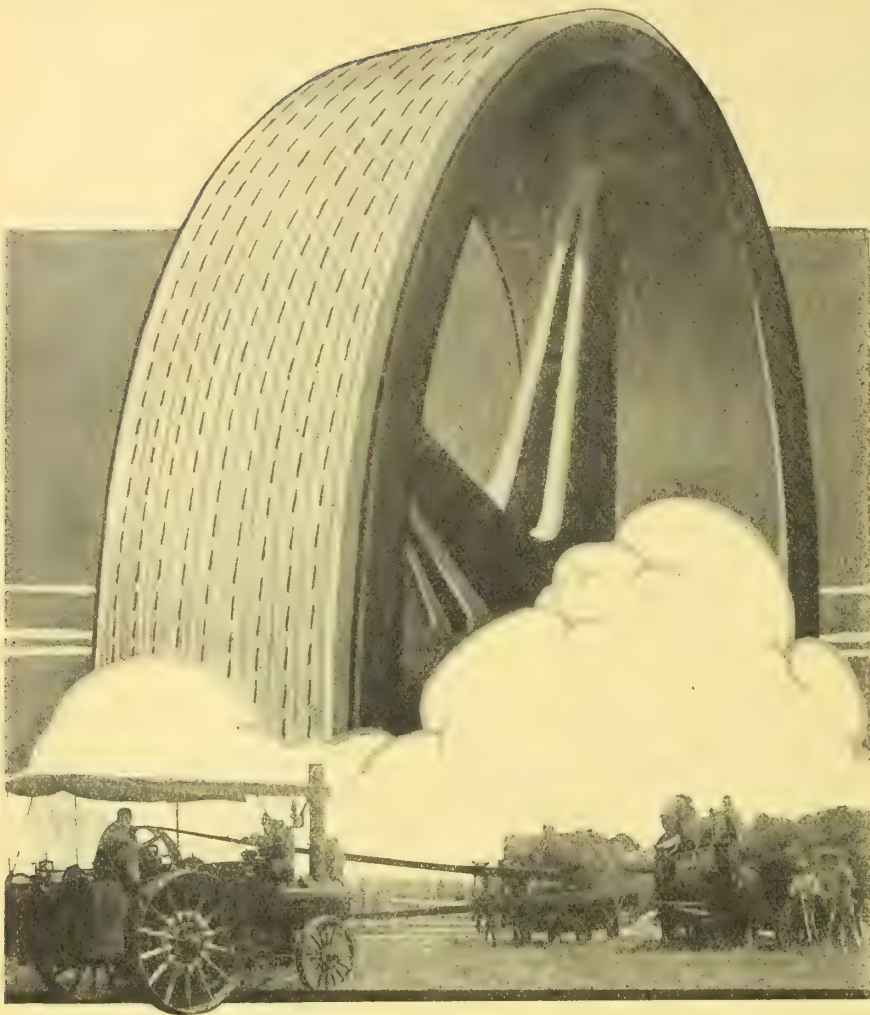
BRANCH OFFICES:

New York, Philadelphia, Pittsburgh, Minneapolis, Chicago, St. Louis, Denver, San Francisco
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Brushes for farm
lighting systems.

MEXICAN BOILER GRAPHITE



Can You Afford to Ignore Economy?

THE Stitched Canvas Belt is the most economical for farm use. That's a fact generally conceded among good farmers.

There's a reason, of course. It costs less to begin with. That's *Economy*. And it gives the farmer user a heapin' measure in good and satisfactory work. That's also *Economy*.

Can you afford to ignore this in your belt buying? Certainly, economy is the thing to look for, and the belt that gives the most for the money should be your choice.

Hettrick Stitched Canvas Belts offer you unmatched service. On those thousands of farms throughout the country long served by Hettrick, belt trouble is something unknown. It's truly "The Belt of Service."

All sizes, all widths, for every power machine.

Hettrick Manufacturing Co.
Toledo, Ohio

Hettrick

Canvas Belts

banquet; this resulted in the election of the old officers, McHarry, O'Malley and Samson.

An effort is being made to organize each county and the convention voted to send a delegate to attend the national convention. Suitable resolutions were passed thanking the national president, W. H. Newsom, for the interest taken in our affairs, to B. B. Clarke, and all others who helped to make our convention a success. We also endorsed the threshermen's lien law.

At the last session, the secretary-treasurer's report was read and accepted. After some discussion as to prices to be charged the coming season, the following resolutions were adopted:

"Whereas the Nebraska Brotherhood of Threshermen realize that the prices charged the past season would work a hardship on farmers at the present low prices of grain, be it resolved:

That we endeavor to reduce our operating expense, our prices for labor, and coöperate with the farmers in doing their threshing as cheaply as is consistent with good business principles."

Taken all together, we had one of the best conventions we have ever had, both as to membership and interest shown. Wednesday afternoon a delegation of about twenty-five men appeared before the judiciary committee of the legislature in behalf of the thresher's lien law and we have hopes of passing the law.

E. M. SAMSON,
Secretary-Treasurer.

Brother Rhinehart, Dayton, Virginia, writes the column that it's about time the Virginia boys were keeping step with Delaware and Maryland. He thinks Virginia should have an organization. We'd certainly welcome a brotherhood on the soil of the heart of Dixie. Come on, Virginia, get in!

The Oklahoma Threshermen's Association showed its customary ability to take care of its members by focusing attention at once on the road laws and tax laws of Oklahoma, when the convention opened, January 25, in Oklahoma City. President John A. Scott had the record of the legislators and he proceeded to spread this record before the assembled threshermen.

The benefits of Oklahoma threshing organization were so apparent that many tractor farmers petitioned for membership. The association has been fighting to retain the present low rate of taxation on tractors (rated by drawbar pull) and the tractor owners wanted to help in fighting this battle. Before the convention closed, this new element in the ranks of threshermen was officially recognized by changing the

association's name to the Oklahoma Tractor and Threshermen's Association.

In view of this change, the association decided not to change the emblem used at present. This emblem is a square field mounted on a circle, said square bearing the initials, I. H. W. W.: In Harmony We Work.

The law for the new insurance company, which is modeled after that of the Indiana brotherhood, has passed the House of Representatives and has been favorably reported by the Senate committee, so before long the Oklahoma brothers should have a strong insurance organization.

The attention to legislative matters was not confined to generalisms. By house bill and senate bill numbers, the association pointed out to the Oklahoma legislators its desires. One law, for seven years on the statute books, was asked to be repealed, as present conditions have shown it to be undesirable.

All three days of the convention were spent in hearing good addresses by prominent men of the state, and in analyzing the work of the legislature.

The following resolutions were adopted:

Be It Resolved, that this association tender a vote of thanks to Mayor Walton and the citizens of Oklahoma City for the welcome and kind treatment given the threshermen and the many courtesies extended to us. Also the confidence and respect accorded us by the Chamber of Commerce and the Retailers' Association by their endorsements; and the business men for their liberal financial assistance.

Be It Further Resolved, that we thank the press of the city and The American Thresherman and Farm Power of Madison, Wisconsin, for the assistance they have given the threshermen of Oklahoma.

Be It Further Resolved, that we thank the Highway Department for the assistance they have rendered this association from time to time.

Be It Further Resolved, that we commend the Legislature for the just and equitable way they have treated the threshermen of Oklahoma by placing and retaining traction engines on the Draw-Bar-Pull rate of taxation as prescribed in Chapter 17 of the 1916 Session Laws and which makes a fair and just taxation without discrimination, from one county to another.

Be It Further Resolved, that we ask the Legislature to amend the 1919 Session Laws, which require all county assessors to furnish the Highway Department a list of all owners of tractors and traction engines in their respective counties, by placing a fine upon the County Assessor not furnishing the list prescribed by the 1919 Session Laws.

Be It Further Resolved, that we ask the Honorable Body of the Legislature to amend the law in connection with tractor taxation so that when papers are served on a delinquent tax payer that the same process will hold the tractor or traction engine until all license or fines have been paid and all fines to go into the Road Fund of the Township to which the tractor corresponds.

Be It Further Resolved, that we extend to Joseph Huckins, Jr., our most sincere and hearty appreciation of the courteous treatment we have received through him and his corps of efficient assistants and for the use of their magnificent Convention Hall.

Be It Further Resolved, that the press of this city and the threshermen's journals be given a copy of these Resolutions.

By your Resolution Committee.
W. T. GRAVES, Chairman,
W. D. AMES, Noble Co.
S. A. WALTON, Blain Co.

And unanimously approved by the Convention at Oklahoma City, Jan. 26, 1921.

The Michigan Brotherhood of Threshermen, meeting at Lansing, Michigan, February 15, 16 and 17, was fortunate in hearing a fine address from Finley P. Mount, president of the Advance-Rumely Company. B. B. Clarke, editor of The American Thresherman and Farm Power, made an all-night trip in order to be present with the boys who won the Monroe county fight of last year. This "show-down," by the way, put a lot of ginger into organization matters in the Wolverine state. The brothers were fully aware of what was meant when the patriot said, "United we stand, divided we fall."

The Ontario report came to us in printed form. Copies of the convention minutes and business were mailed, in folder form, to all members of the Ontario brotherhood. We claim that these Canadian threshermen know how to do things right.

The report of the Seventh annual convention of the Ontario Brotherhood of Threshermen, held in the City Council Chambers, Harrison Hall, Chatham, January 27, 28 and 29, 1921, is here given as received:

January 27.

3 P. M.—Meeting called to order by President Joseph Cushman. Minutes read by secretary and signed by president. W. D. Colby, R. D. Bodkin and D. J. Egan were appointed as Ways and Means committee and also auditors.

Report of legislative committee by R. D. Bodkin, as to the different laws which had come up during the year and what had been done.

The committee for revision of constitution reported that all clauses and sections of new constitution were in the hands of the secretary.

General discussion by various members as to whether the secretary's office could be used as bureau for the employment of such men as separator men and engineers who may be needed by various members. Such men to be reported from time to time from members where there are a surplus of such.

Adjournment until 7:30 P. M.

7:30 P. M.—Meeting called to order by President Joseph Cushman. Address of Welcome by Mayor F. H. Brisco, of Chatham. Responses by W. D. Colby and William Chapman, who also moved and seconded a hearty vote of thanks to the mayor.

An address by W. H. Newsom on the workings and accomplishments of the National Association of Brotherhoods of Threshers, and how to make it help the different associations to better advantage.

Secretary-treasurer's financial statement.

Auditors' report.

Report of year's work by the president, and a criticism of members for not backing the officers as they should. Discussion by members as to the best way to remedy this condition.

Adjournment until 9:00 A. M. on January 28.

January 28.

9 A. M.—Meeting called to order by president.

Address by W. H. Newsom, on "Insurance."

Reading of legal advice, by the secretary, on formalities to be complied with to incorporate an insurance company for insuring threshing machinery.

A discussion of same by various members, which resulted in a committee being appointed to take steps in starting an insurance company, and the raising of eight hundred dollars to pay various expenses of said committee.

Revision of by-laws and constitution.

Moved by Geo. O'Malley, seconded by A. E. Fry, that all clauses and sections as read be adopted, with the exception of



SKF
Research Laboratory
established at Philadelphia to co-operate with the Gothenburg Laboratories in the study of the American Manufacturers' friction problems.

THE technical advice brought you by our engineers embodies the experience of highly trained organizations in all parts of the world in the solving of friction problems.

This international experience is both technical and practical and is acquired in co-effort with the best international research endeavor.

SKF service in America is linked to this international experience. Its tangible evidence is found in products marked "**SKF**" and in the advice supplied you by our engineers.

SKF Industries, Inc.
165 Broadway, New York City

Supervising
at the request
of the stock-
holders.

The Hess-Bright Manufacturing Co.
SKF Ball Bearing Co.
Atlas Ball Co.
Hubbard Machine Co.
SKF Research Laboratories



SOUTHERN OIL & FEED MILLS, INC.
MILLS
PETERSBURG, VA. — SUFFOLK, VA.
PRINCIPAL OFFICE
PETERSBURG, VA.
Cable Address: VONESCO
Codes Used: ABC—5TH ED IMPROVED
YODRS—7TH ED REV
ROBINSON—REVISED
March 26, 1920.
April 23, 1920.
S K F Industries,
165 Broadway,
New York City.
Gentlemen:
Attention Chief Engineer
We wish to thank you, and to say that we appreciate highly your sending ***** here to assist us with the trouble we were having with ball bearings in our mill. Mr. ***** has made us some very valuable suggestions, and we believe, his visit to us is going to prove most profitable. We wish also to thank you for your promptness in forwarding the two 6316 bearings, which came in very promptly.
It is indeed a pleasure to have business relations with a concern that chooses such a policy, as you have shown to us in this instance.
Again thanking you most cordially, we are
Yours very truly,
SOUTHERN OIL & FEED MILLS, INC.
BY: (Signed) [Signature]

SKF

Among these products now offered are:

Single row deep groove ball bearings. Thrust bearings. Steel balls.
Double row self aligning ball bearings. Transmission equipment.

Mention The American Thresherman and Farm Power

Take a Look at this Handy Oiler

Just what you need with your power machines. Press the plunger and the oil is forced up or down, to "hard-to-get-at" places. Let go of your finger and the oil flow stops instantly.

The Genuine Cannon Pump Oiler

The flow of oil is in absolute control of the operator. Works satisfactorily on all weights of oil. Spout never clogs. Safe, convenient, economical. Five sizes. Stocked by all dealers.

CANNON OILER CO.
Keithsburg, Ill.
Sole Manufacturers

CYCLONE SAW MILL BLOWERS

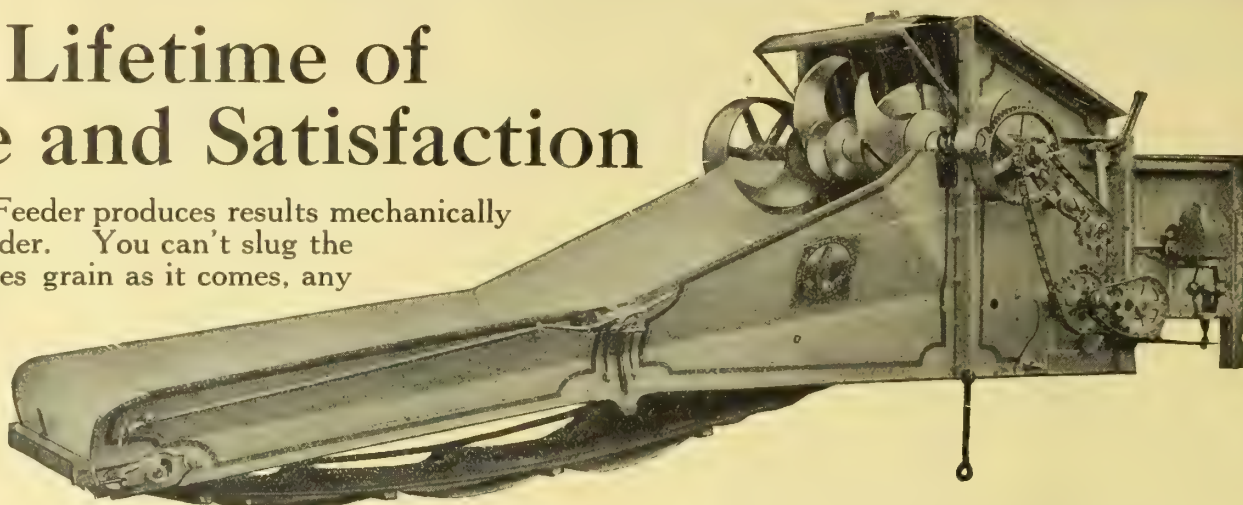
Ready to install on any make of mill. Will carry all sawdust anywhere from 25 to 100 feet. Save the time and labor cost of constant shoveling. They pay for themselves many times over in the course of a year. Simple to install and fully guaranteed. Operated with 1/2 to 1 1/2 H. P.

Write immediately for circular and prices.

THE RAMEY MFG. COMPANY
Columbus Ohio

Built for a Lifetime of Service and Satisfaction

The Maytag-Ruth Steel Self Feeder produces results mechanically impossible with any other feeder. You can't slug the cylinder in the Ruth. It takes grain as it comes, any kind—wet—dry—tangled—straight—stack-burned or loose, and feeds it to the cylinder better than human hands can do it.



Maytag-Ruth

STEEL SELF FEEDER

is built for a lifetime of service and satisfaction. It is designed along strong and sturdy lines and is of all steel and malleable construction.

MAYTAG LIGHT STEEL RUTH

is especially designed for use on small threshers, being built for individual and community threshing. It makes your little machine do big work.

The MAYTAG-RUTH FEEDER is attachable to all standard makes of separators including McCormick and Deering Harvester Threshers. Made in crank or rotary styles.

Write for complete information.

THE MAYTAG COMPANY

DEPARTMENT 5

NEWTON, IOWA

A Guarantee That Binds

Such faith have we in the RUTH FEEDER that we guarantee every Ruth Feeder to feed any make or size of separator to its fullest capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stack-burned, wet or dry, piled on the carrier any way you please, without slugging the separator cylinder or loosening a spike, and do a faster, cleaner and better job of feeding than any feeder manufactured by any other company in the world.

BRANCHES:

Kansas City	Wichita	Portland
Indianapolis		Winnipeg
Madison	Lincoln	Fargo
Minneapolis		Philadelphia

Mention The American Thresherman and Farm Power

clause 2, section 4, which be amended to read that the membership fee for this Association be five dollars, payable at each annual convention, or at the expiration of receipt. Four dollars be in payment to the Ontario Brotherhood, and one dollar for the county in which he may reside, and a receipt issued accordingly.—Carried. (This clause to be regulated by clause 7.)

Moved by Mr. McCrae, seconded by Mr. Down, that the word secretary-treasurer be changed to two separate words, so that the offices may be separated at any time that it may be advisable to do so.—Carried.

Moved by Mr. Colby, seconded by Mr. Bodkin that all members present make a donation of three dollars to the treasury to bridge the gulf caused by the past year's deficiency.—Carried. (This resulted in \$198 being added to the treasury.)

Moved by Mr. Bodkin, seconded by Mr. McCrae, that this association accept the Corn Growers' invitation and go in a body to the lectures in St. Andrew's Hall at 2 P. M.—Carried.

January 28.

7:30 P. M.—Meeting called to order by president, who then turned chairmanship over to Mr. S. Oaks for the election of officers.

The following officers were elected unanimously: president, Joseph Cushman, London; vice president, Wm. Chapman, Denfield; secretary-treasurer, Byrell Harris, Bear Line; executive committee, A. Early, Mr. Sol. Burke; legislative committee, R. D. Bodkin.

Moved by Mr. D. J. Egan, seconded by Mr. R. D. Bodkin, that Toronto be our next place of meeting.—Carried.

Address by A. B. McCoig on the past accomplishments of Kent County. A vote of thanks was tendered Mr. McCoig. Address by Mr. J. D. Landis on "Local Organization," dealing with the importance and the ways of organizing such counties.

Adjournment until 9 A. M., January 29.

January 29.

9 A. M.—Installation of officers by John McCrae.

Address by J. Webster, M. P. P., on day of legislation and how best to

combat it. A hearty vote of thanks was tendered Mr. Webster.—Carried.

Short addresses were delivered by James Miller and Chas. Agar.

Moved by Mr. Bodkin, seconded by Mr. Down, that we make The American Thresherman and Farm Power our official organ, that every member should be a subscriber, but that Mr. Landis be at the annual convention to collect subscriptions.—Carried.

God save the King!

The Bi-state convention justified the belief of Toledo men that north-west Ohio and southeast Michigan can support a neighborhood convention all their own. This convention could almost be called a tri-state affair; for Indiana was well-represented at the 1921 convention.

The fine Terminal Building hall was used, February 3, 4 and 5. The mayor of Toledo made the visiting threshermen welcome, after which Tom Walker, the hero of the Monroe county, Michigan, fight of last year, made a "gingery" response. Later in the convention Mr. Walker was elected chairman of next year's meeting.

Organization work in all its phases was presented by George Durban, Ohio, William Kohlmeyer, Michigan, and J. B. Parker, Indiana. Engine, oil and belting service were discussed by experts from the big Ohio companies. The meeting throughout had a very practical trend.

W. O. Kiracofe, chairman of the program committee, paid a neat

tribute to the thirteen firms who shared the expense of this helpful convention. On the last page of the program appeared the simple statement: "The following firms pay the expenses of this meeting." Brothers who realize how "tight" money has been, during recent months, should bear in mind these firms who gladly produced the cash that this meeting might be a success.

The courtesy of H. V. Buelow, manager of the National Farmers' Exposition, was fully appreciated by the men at Toledo. Mr. Buelow, was present at all meetings during the convention; in fact, he has a higher regard for the importance of threshermen, in relation to farming, than most men in similar positions. In his plans for the big exposition to take place December 5 to 11, 1921, he has set aside two days as Threshermen's days. This is more than ordinary consideration, and the threshermen realized it, as evidence of which the following resolution was adopted:

Resolved: We the undersigned officers of the Ohio Brotherhood of Threshermen, the Indiana Brotherhood of Threshermen, and the Michigan Threshermen's Association, together with the threshermen assembled, pledge our sanction and support to the Eighth Annual National Farmers' Exposition to be held at Toledo, December 5 to 11 inclusive, 1921.

This action is taken because the seven previous Expositions have proved of exceptional educational value to the threshermen of the above named states, because it is an enterprise not operated for

private profit, and because of the clean and efficient management of the shows.

We urge all our members to be present at the threshermen's meetings which will be held during the 1921 exposition and we take this means to wish the coming event the greatest success.

We hereby tender to H. V. Buelow, the exposition manager, a vote of thanks for the courtesies and hospitality extended to us in the past.

We request this resolution be placed on the minutes of this convention and a copy sent to The American Thresherman and Farm Power for publication.

Signed: GEORGE DURBAN,
OHIO BROTHERHOOD OF THRESHERMEN
BERT A. DICKEY,
MICHIGAN THRESHERMEN'S ASSOCIATION
J. B. PARKER,
INDIANA BROTHERHOOD OF THRESHERMEN
Date, February 4, 1921.

Tim Payne of Kansas has long been a big factor in threshing affairs of his state. That the passing years only add to his "pep" is evidenced by the convention program which announced the Nineteenth Annual Convention of the Kansas Brotherhood of Threshermen, held at Topeka, February 11 and 12.

Clippings of Topeka newspapers reached this column from another source. The Daily Capital (Senator Capper's) had a fine write-up of the Kansas convention, giving pictures of J. F. King, president, Tim Payne, secretary - treasurer, and Steve Holmes, agency manager for the Threshermen's Mutual Insurance Association. All of these men made good talks. About one hundred and fifty threshermen were on hand to

(Continued on page 44.)



The E-B Reeves Threshing
Outfit satisfies customers

What Father Thought An *Expense* Son Makes An *Investment*

THE E-B LINE

Binder Engines
Corn Binders
Cultivators
Gas Engines
Grain Binders
Grain Drills
Harrows
Hay Loaders
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Pump Jacks
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Fargo, N. D.
Harrisburg, Pa.
Indianapolis, Ind.
Kansas City, Mo.
Minneapolis, Minn.

Nashville, Tenn.
Oklahoma City, Neb.
Omaha, Neb.
Peoria, Ill.
Rockford, Ill.
Salisbury, N. C.
Sioux Falls, S. D.
St. Louis, Mo.
Trenton, N. J.
Wichita, Kans.

Export Office:
Grand Central Palace, New York City

A MIDDLE WESTERN FARMER works the same acreage that he, his brother and father used to farm. And he makes *more* money.

His father used the implements others threw away—unknown makes for which repairs were hard to get or unobtainable. To him, farm machinery was an expense—one to keep small. The son buys *known* tools—the best. He believes that implements to a great extent determine his profits—that implements are an *investment*.

This year farm profits will depend largely on production costs—hence on implements. Before investing, the careful farmer will

ask: “Does this machine mean better, faster work—is it dependable and durable?” Sixty-eight years’ experience has served to answer these questions correctly in the E-B line. Your investment is protected. Every E-B tool is made to work when needed, to last many years, to lower production costs—facts attested to by farmers everywhere.

Close study of the farmer’s needs has taught us *what* to make—sixty-eight years’ experience has taught us *how* to make it.

Emerson-Brantingham Implement Company, Inc.

Established 1852



Rockford, Illinois

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company



Own a Real Outfit This Year

Machinery and labor make the thresherman's expenses. You can't very well cut labor costs, but you can cut machinery costs with an outfit that runs steadily—keeps threshing out the grain every day through the season—threshes many, many days when weather conditions will not permit other makes to run. Start your season this year with a

Red River Special

Don't overlook the big feature—it **beats out** the grain and leaves a clean straw pile. The big, smooth-running cylinder with its "Man Behind the Gun" and the **beating shakers** do the work.

Seventy-three years' experience in building threshing machinery exclusively is back of this thresher. Experienced threshermen know its dependability—"on the job" every day right through the busiest season. Decide now to make bigger profits by running a Red River Special with a Nichols-Shepard Steam Engine or Oil-Gas Tractor.

Write for circulars.

Nichols & Shepard Co.
Battle Creek, Michigan

In Continuous Business Since 1848

Builders Exclusively of Red River Special
Threshers, Wind Stackers, Feeders, Steam
and Oil-Gas Traction Engines.

Correspondence

My February copy of The American Thresherman and Farm Power just arrived and I have read it from cover to cover. I suppose the majority of subscribers look forward to the coming of this magazine from month to month, just as I do. The Correspondence Department is what I always read first and then the Organization Notes.

I have often noticed that threshermen ask to see the price of threshing discussed more thoroughly. I for one, would like to see a small department in this great paper set aside for the discussion of this question.

I agree with Mr. Williams in the February issue, that "United we stand, divided we fall," but of course we could not have a uniform price all over the country, as in some parts the jobs are small and all that the thresherman furnishes is three men; while in other places the jobs are large and the thresherman furnishes the machine crew and pitchers and runs a cook shack and maybe furnishes the fuel. Then, again, perhaps he will furnish the crew and pitchers and the farmer boards them; so it would be hard to set a uniform price, although I would like to see something agreed upon along this line.

In 1919 we charged nine cents per bushel for wheat and furnished the machine crew and pitchers and the farmer boarded us, but we didn't make any money. We paid the machine crew by the day, and the pitchers \$2.40 per hundred. So in 1920 we charged fourteen cents per bushel, furnished same labor as in 1919, but paid all the help by the bushel (except the water hauler) and made some money, although collections were poor on account of wheat dropping in price.

The farmers "sure made a holler" about the five cent raise over the 1919 price; quite a lot of them were going to buy community outfits, but for some reason did not do it; those who had said they would not pay fourteen cents per bushel, paid it and never said a word.

We have not decided on the 1921 price yet. We expect to run cook shacks with each outfit. My brother and I run five outfits. I hope to see the New Mexico threshermen organized in another year, as I believe it would be a great help to us.

I notice Mr. Pogue wishes information regarding a hitch to haul an oil wagon behind his separator. I believe he will find he can save time and money, if he will get a two-wheel self-guiding engine tender and put it behind his tractor to haul his fuel oil. He will find this a very handy and economical arrangement.

I would like to read something from brother threshermen regarding the price question and also the best plan for building a cook shack. I would like to see plans of a cook shack and get some idea of the cost of a good one. V. H. ANDERSON.

Roy, New Mexico.

In the February issue, Forest C. Pogue asks how to haul his heavy oil tank behind his separator without injuring the blower. This is my way:

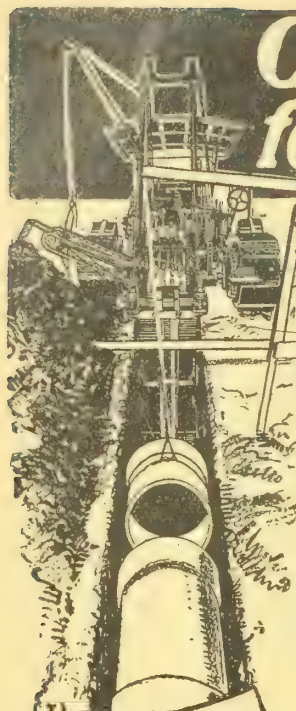
My oil tank holds five hundred and twenty-three gallons. My separator has a thirty-two-inch cylinder. The blower is on the left side. If the wagon tongue were hitched to the center of the axle, or to the rear cross member of the frame, the tongue would strike the blower when turning to the left. If the tongue could be fastened to the rear cross member of the blower, it would pull without striking the blower, but that cross piece is not strong enough to haul a heavy tank, so I fasten a heavy ring to the center of the rear cross piece of the blower and fasten a common three-eighths-inch log chain to the separator axle, pass it over the rear cross member of the separator, and then through the ring mentioned. The pull comes on the axle and the ring holds it away from the blower. When threshing, the tank stands behind the tractor, not crossways, but at an angle with the front farthest away.



The Baker Boys Like to Use Both Kerosene and Steam Power.

Mention The Auctioneers Threshing and Farm P

Opfer Got \$160 for 48 Hours Work



In every locality there's plenty to do. You'll be busy 7 to 10 months in the year. The income is from \$15 to \$20 a day, the expense little. Mr. Opfer is only one of many of our friends who are making that much and more with a

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send for Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for this book; you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.
197 Crystal Avenue Findlay, Ohio

READ THIS LETTER

I excavated a trench 16,000 feet long, average depth 25 inches. I received 1c per lineal foot, or \$160 for the job, and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him. I tightened the governor to gain speed and in 2 3/4 hours had the 2,200 feet finished. Average of 800 feet per hour for the two and three-fourths hours at 1c per foot is \$3.00 per hour.

JOHN C. OPFER, Sandusky, O.

Mention The American Thresherman and Farm Power

APPRECIATION

of the response made by Threshermen is hereby expressed—in that any renewals of Governors be made in the winter months—and we are both assured now of continued service without break-downs or inefficiency for the 1921 season.



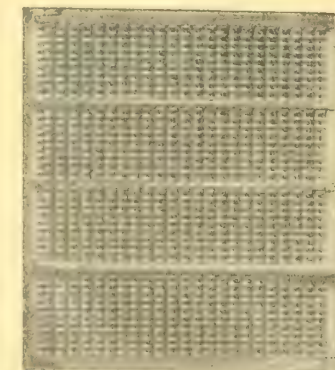
If any have not made the annual inspection or overhauling yet, we will be glad to confer with them on learning the make and horse power of engine involved. Probably we can send testimonial letters applying to their particular power plant for reading and re-assurance, and this service is entirely without obligation as to eventual purchase.

Pickering Governors are now available in all the larger cities of the United States and we will be glad to furnish name and address of nearest jobber upon request.

The Pickering Governor Co., Portland, Conn., U. S. A.

Mention The American Thresherman and Farm Power

The Charles Closz Patent Adjustable Sieves and Chaffers



have gained a world wide reputation for being the very best and only thoroughly reliable separating and cleaning devices for all makes of threshing machines.

They are used very extensively and successfully in all makes of threshers throughout the U. S. and Canada and all foreign countries.

Write for our catalog with price list and any other information you may desire about the use of our sieves and chaffers, and mention size and make of your separator.

Charles Closz Co., Inc.
Webster City, Iowa

that carry the concaves with a lever, and that will clear the cylinder and concave lock. The concave lock is a locking plate bolted to the cylinder walls between the cylinder and the concaves. It seems to me that this device will prove a big step in the right direction in making the work of us threshermen easier.

Oakville, Iowa. J. W. KUNTZ.

I have been a reader of The American Thresherman and Farm Power for a year, and you will know by the enclosed renewal that it has received a warm welcome in our home.

I am enclosing a picture of our corn shredder at work. We own a Rumely 20-horse power engine, a six-roll McCormick shredder, a Belleville

a re-cleaner; it was sold just as it came out of the separator. This seed ran forty-four pounds to the bushel.

We were at first afraid that it would not be profitable to thresh sudan seed, but we received one cent a pound, and on account of the amount of work accomplished our gross earnings were over \$13.20 per hour.

REESE CLARK.

Hazelton, Kansas.

This is to tell you I have always thought steam engines were good enough for me. I have been a user of steam engines for fifty-five years and expect to use them as long as I am able. I have seen several makes of tractors at work; they are very good for plowing and for running



Julius G. Meyer, Hillsboro, Missouri, Included the Ladies in His Picture.

separator and a Reeves sawmill, all of which we like very much.

We have never succeeded in getting a good picture of threshing, but hope to be able to send you one soon. JULIUS G. MEYER & SON.
Hillsboro, Mo.

I wish to say that my charge for threshing clover seed during the year 1920 was two dollars per bushel for sweet clover and three dollars per bushel for red clover. I hope this information will be of some value to Mr. F. L. Naessig of Webster, South Dakota, who charged one dollar per bushel for threshing clover seed and failed to collect the threshing bill.

I hardly think Mr. Naessig was profiteering when he made these charges; indeed, I think he should charge more for his services next time. W. E. TALLEY.

Lees Summit, Mo.

We find that we can thresh sudan grass all right with our 28x46 Avery, which we bought in 1919. Some threshermen object to threshing sudan, on account of the length of the stalks and the character of the seed. We had been told that we could not expect to do a good job; but although we had the grass shocked in bundles five feet long, we were able to thresh an average of thirty bushels of seed an hour, and the work we did was so clean that we did not have to run the seed through

light machinery, but when it comes to threshing they all have to take their hats off to steam. Several have been tried in our country, but so far they have failed. Nothing is as good as the reliable 20-horse power steam engine for me.

If you will advise B. B. Clarke to send me a subscription blank, I will send him a subscription for The American Thresherman and Farm Power, and also some names of new subscribers. Let me hear from you or any readers who agree with me on this matter of steam engines.

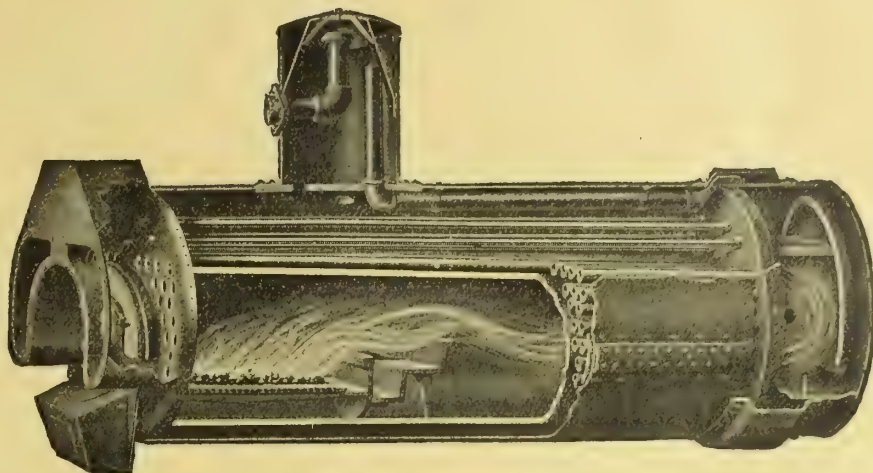
C. J. CAMPBELL.

Hamilton, Ohio.



Outfit of G. D. Baker, Alma, Nebraska. Whose Letter on Threshing Costs Appeared in the January Issue.

This Huber return flue boiler with which all of the New Huber Traction Engines are equipped is most economical on fuel. The fire is entirely surrounded by water. And as the fire goes through the boiler twice, the fuel is completely consumed before it reaches the smoke stack.



Flues are easily accessible from either end without crawling into the fire box. There are no stay-bolts on the boiler to rust and leak. These features cut down the expense for repairs and the time that the engine is out of service.

Dependability and Low Operating Cost In a Steam Traction Engine

FOR 44 years American threshermen have known and preferred the Huber Farm Engines. Since the first Huber Engine was built all the Huber resources have been employed to improve it in economy and power and to increase the length of its life. A New Huber Traction Engine of today will last a business life-time.

The famous Huber return flue boiler shown above is unequalled for economy and freedom from repairs. It gets more power out of your fuel than any boiler that has ever been designed for a traction engine.

And the New Huber Traction Engine not only gets more power out of fuel but it delivers more of it in useful work to the belt pulley on the ground.

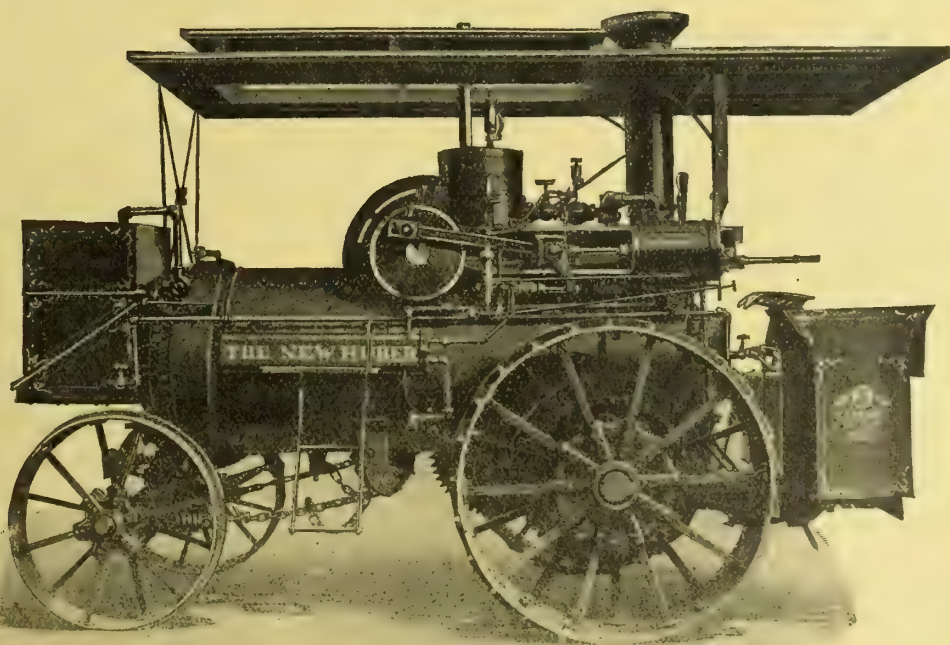
The Huber Boiler and Engine are mounted over the rear live axle. A greater road clearance is made possible by this higher mounting, and that is most important in work on the roads. Difficulties in keeping the gears and wheels in perfect alignment are removed. Each engine may be equipped with a friction guide which utilizes the power of the engine for steering.

Less power is absorbed in friction by the all-spur-gear-drive from the engine to the drive wheels, than by any other known form of drive. There are no bevel gears to spread. The exhaust relief enables the operator to force a slow draft.

Every detail of Huber is as strong as every other—made so by over 40 years of experience and experiment. There are no weak parts to give trouble. Send for catalog describing the construction in full.

Huber Manufacturing Co. 445 Center Street Marion, Ohio
Makers of Huber Light Four Tractor

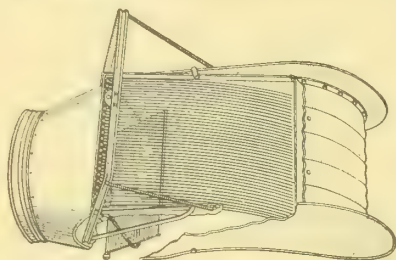
BRANCHES: Harrisburg, Pa. Lansing, Mich. Indianapolis, Ind. Peoria, Ill. Wichita, Kans. Crowley, La.
Des Moines, Iowa Lincoln, Nebr. Minneapolis, Minn. Fargo, N. D. CANADIAN BRANCH, Brandon, Man.



New HUBER Threshing Outfit

The New Huber Thresher with the New Huber Traction Engine completes the New Huber Threshing Outfit. It is made in sizes from 24x42, 28x48, 32x54, and 36x60. It runs light, threshes clean, and "saves the grain." The counterbalanced rack increases the agitation of the straw and reduces the vibration, insuring good work and a longer life. Ask for booklet, "It Saves the Grain."

Save Straw and Chaff by using the Determann Stacker Hood



No wires to clog. No screen to clog.

The operator has complete control over his blast by adjusting the springs on the throat plate according to his speed and amount of straw which goes through the tube.

It does not blow any dirt or chaff on the man on the straw pile. It saves more straw and chaff than any other hood made.

You can top off a stack, just as good as with a web stacker.

10 days' trial free. Agents wanted.

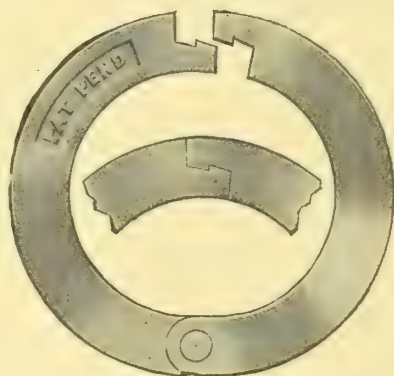
LYONS MACHINE WORKS

LYONS, IOWA

CUT DOWN YOUR REPAIR BILLS

USE QUICK REPAIR WASHERS

They take up endplay on the shaft. They are adjusted without tearing down your machine.



They are reasonably priced. They are made of the best materials, in brass, steel and bronze.

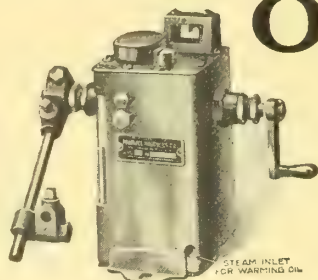
ASK YOUR DEALER OR WRITE US

QUICK REPAIR WASHER COMPANY

TRACTION BUILDING

INDIANAPOLIS, IND.

You Need This Oil Pump



You need it because it will oil your engine the way it ought to be oiled. It will do away with all of your lubrication troubles, and will cut down your oil bills 30 to 60%. You will find

The "Manzel" Sight Feed Oil Pump Piston Valve Type—Model "XD"

different from any oil pump you have ever used. It is different in design, different in construction, different in durability, different in the way it saves oil.

It's made to work right in warm or cold weather, to pump against any steam pressure, to feed just the right amount of oil, and to feed it regularly. It's the pump you need if you want to avoid lubrication troubles this season.

Let Us Send You One on 30 Days' Trial

Order one now and attach it when you overhaul your engine this spring. If you don't find it satisfactory after thirty days' use (during the threshing season) return it at our expense.

Ask for catalog "XD517"

MANZEL BROTHERS COMPANY

311-313 Babcock Street

Buffalo, N. Y.

More at Less Expense

BY ED. HENRY

MOST farmers want to save money. So when I say that a farmer can haul the same load on his truck while using less oil and gasoline, with less wear and tear on parts, and less expense for labor and repairs, the farmers will be interested. But if I say that he can safely overload it as much as fifty per cent,—naturally I shall be doubted. Yet this fact has been proven after thorough tests.

The secret lies in equipping a standard solid-tired truck with pneumatic tires—not the ordinary fabric type, but the long-wearing and more resilient cord variety. Of course, this will cost a few dollars more at the start but the saving in the end will much more than discount this. Even though there be no increase in tire mileage, the increased capacity of the truck and the reduced oil and gasoline consumption necessary to transport the same load will more than overbalance this higher first cost; to say nothing of the lessened repair and upkeep expense.

Here is a clear illustration: two farmers, neighbors of mine, own trucks of exactly the same make, model, and rated load capacity (one-ton), but differing in that Farmer Smith's is equipped with pneumatic cord tires while Jackson's has the regular stock equipment—an equally good make of solid tires. Jackson took the standard tire equipment because the salesman told him he would never have any roadside delays due to punctures, as happens sometimes with pneumatics.

Smith went more deeply into the subject, and learned that the government was one of the first to realize the value of pneumatic cord tires, specifying that all its one and one-half-ton war trucks be so equipped. While this increased the initial truck cost, it was discovered that the truck had greater capacity, withstood greater hardships, effected a saving in oil and fuel, and had many other advantages that more than offset the extra tire expense.

Smith also learned that some years ago, when the manufacture of trucks was still in its infancy, several manufacturers undertook to turn out pneumatic-tired models, but at that time pneumatic tires were still somewhat of an uncertain proposition, so they soon gave way to the solid-rubber type. One firm in particular produced a three-fourths-ton truck which weighed two thousand pounds, but when it discarded pneumatics for solid tires it found the chassis had to be practically redesigned: every important part, springs, axles, etc., had to be built much sturdier. Thus when the new

job was completed with solid tires and ready for the road, it weighed exactly 2950 pounds, yet its load capacity was exactly the same. A half-ton of dead weight had been added requiring twenty per cent more gasoline to propel the truck. Considering these facts, Smith chose pneumatic cord equipment.

After the two trucks had been in use a while, Smith and Jackson compared notes and Jackson found that Smith's bills for gasoline and oil were considerably below his. As both hauled practically the same loads, to the same markets, he could not understand this, and he still doubted when Smith explained laconically "pneumatic tires." He had also noted that Smith made his trip in shorter time than he could, therefore he charged Smith with driving faster than he ought. Smith denied the accusation and said it was safe and easy with pneumatics. They then compared repair bills and Jackson found here there was no comparison, as Smith's were practically nil while his showed the need of occasional adjustments.

Sometime later Jackson learned that while the agent had told him the truth in regard to delays due to roadside puncture, yet when he did have to have new tires he found it meant a trip to his agent's garage where the solid tires were applied, with a loss of an entire day during the busy season. The agent also warned him against allowing the tires to become badly worn, for if not renewed in time their cushioning properties became so small as to rack the chassis considerably. Smith had avoided all this because he had demountable rims; with him, changing a worn-out or punctured tire was the work of a few minutes.

Sometime later Jackson noticed that he and Smith were making about the same time to market and he joked him about it.

"Yes," acknowledged Smith, "I've been having a lot of extra stuff to take to market lately so I am overloading my truck about half a ton each trip, therefore I can't make such good time as formerly."

That set Jackson to thinking. He had had some "extra stuff" too, but thought it necessary to make extra trips as he had been cautioned strictly against overloading. But, he reasoned, if Smith, who had the very same kind of truck, could get away with it—why couldn't he? So he tried it. For several trips everything went all right and he was congratulating himself on his acumen when one day with a particularly heavy load, he broke down. He sent for help, and when the repairman

arrived, after a preliminary examination and survey of the situation, he remarked with a shrug: "Been overloading, hey? Didn't I warn you about that?"

"Yes," acknowledged Jackson, "but Smith has been doing it lately with no bad results, and he has the same kind of machine."

"Yes," agreed the repairman drily, "he has, but he has pneumatic equipment all around, and that's different."

Jackson had a big bill for overhauling and repairs, and when he paid it resolved his next set of tires should be pneumatic cords.

Truck engineering authorities state that pneumatic tires cut vibration and relieve road-strain to such an extent that the load capacity of a truck chassis can be increased fifty per cent. The engineers of one company in particular are advocating overloading if the tire equipment is pneumatic. This company has many one and one-half-ton machines in use

that are regularly hauling two tons.

As practically all tire makers are now turning out cord tires, it is not so much a question of which brand is selected, as it is a matter of selecting a good make. Most reliable manufacturers guarantee them to make good.

Any farmer who needs a two-ton truck but who feels he can only afford the price of the ton and a half size, can purchase the latter, then have it equipped with pneumatic cords at comparatively little extra cost. Thus he can have a perfectly trustworthy two-ton truck at a price he feels he can afford. Or, if he has the price of the size he needs, he can save part of it by purchasing a smaller model and have it equipped with pneumatic cords.

Those who doubt the truth of this assertion are invited to take the matter up with the truck manufacturer. Ask him for his honest opinion; you will find that it is really possible to get more miles for less gas.

Be Prepared for Emergency

BY J. CROW TAYLOR

BEING prepared for emergency before entering into the busy season of threshing saves both time and money.

Generally a man can, while overhauling his equipment and putting it in order, give a pretty good guess as to what parts are likely to give away before the season is over and he should make a list of these parts and fortify himself with such preparations as are practical.

To be specific, suppose you have some sprocket chains that are getting pretty well worn yet you are not quite ready to throw them away. The safest and best bet is to order new chains immediately and carry them in reserve. You can supplement this with a few extra links for repairs if you want to and continue the older chains in service a little longer by quick repairing with new links. All these new links can be taken out when the old chain is discarded and kept in reserve to make repairs in the new chain. This is but one item which serves to illustrate how and what can be prepared for many of the emergency interruptions which waste both time and money during the busy season. A successful season depends more on keeping steadily at it than on making a brilliant showing now and then with break-downs and interruptions between times.

Moreover, the experienced thresherman can by thinking back recall where and how most of the accidents happen, what parts give way most frequently, and a little time spent in casting over the record of previous years will often furnish a hint of safeguards that can be taken that will save time during the busy season.

It is a whole lot better to spend a little money on extra parts and emergency equipment than to spend idle time waiting for new parts or in making repairs during the busy season. The advisability of preparedness of this kind applies to engines and to other machines as well as to the thresher itself. Looking ahead and making preparations for accidents as if you anticipate them is a splendid way to prevent many of them. Also it will help you in making repairs and getting into action quickly when something gives way.

A gentleman in business on Broadway, New York, was greatly annoyed by the tardiness of one of his skilled engravers.

Calling him into the office one morning, he said:

"Mr. Brown, I get here at 8:30 every morning and look over my mail; at 9 o'clock I look out of the window and see young Mr. Rockefeller on his way to the office; at 9:30 Mr. Stillman passes; at 10 I see Mr. Vanderlip going by; at 10:30 Mr. Taft passes on the way to his office; and at 11 you come in. Who the —— are you?"—*The Neighbor*.

The explosive force of one gallon of gasoline properly mixed with air and compressed is equal to eighty-three and two-third pounds of dynamite.

The rise of a statesman's popularity is during that period when he is able to promise every fellow exactly what he wants. The *debacle* happens when the notes come due and go to protest. —*New York Evening Mail*.



Paid in Full

The moment you cut a carload of lumber from your wood lot with an "American" Farm Saw Mill it is paid for in full, for a carload of lumber buys an "American." An

"American" Farm Saw Mill

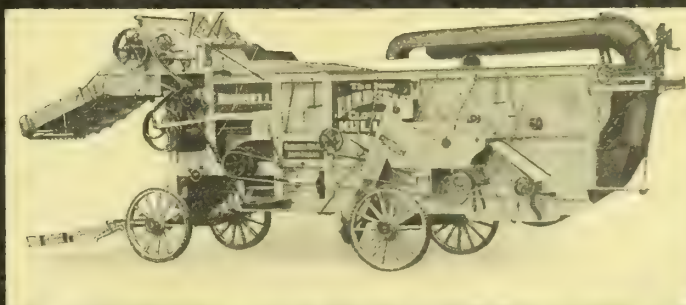
will cut a carload of lumber a day from the trees standing on your wood lot. Your tractor or farm engine will drive it. You get your lumber at the mere cost of sawing. The balance you can sell to your neighbors at a good profit.

Write for the "American" Catalog. Prices are right, deliveries prompt.

AMERICAN SAW MILL MACHINERY CO.
71 MAIN STREET HACKETTSTOWN, N. J.

Mention The American Thresherman and Farm Power

Birdsell Clover and Alfalfa Hullers Are a Guaranty of Success To Their Owners



MEN often fail in business because of mistakes in management. Poor buying is the cause. Threshermen who make mistakes by buying poor machinery cut their profits and ruin their chances for success

**Birdsell Hullers Always Satisfy—
They Pay Good Returns**

You cannot make an error in judgment when you buy a "Birdsell." It always proves a valuable asset. There is less depreciation on a Birdsell Huller than any other piece of machinery made. It is built right and stays right.

Birdsell Mfg. Co.
South Bend, Indiana



No Job of Plowing Too Big or Too Heavy for Case Tractors

ON the largest farm in the world—that of the Montana Farming Corporation, in Montana, where grain is grown on a scale figured in multiples of thousands of acres—a battery of Case Kerosene Tractors helps plow the ground, prepare the seedbed, drill the grain, harvest and thresh the crops, and haul the grain to the shipping point. Big-scale farming is not *too big* for Case Tractors.

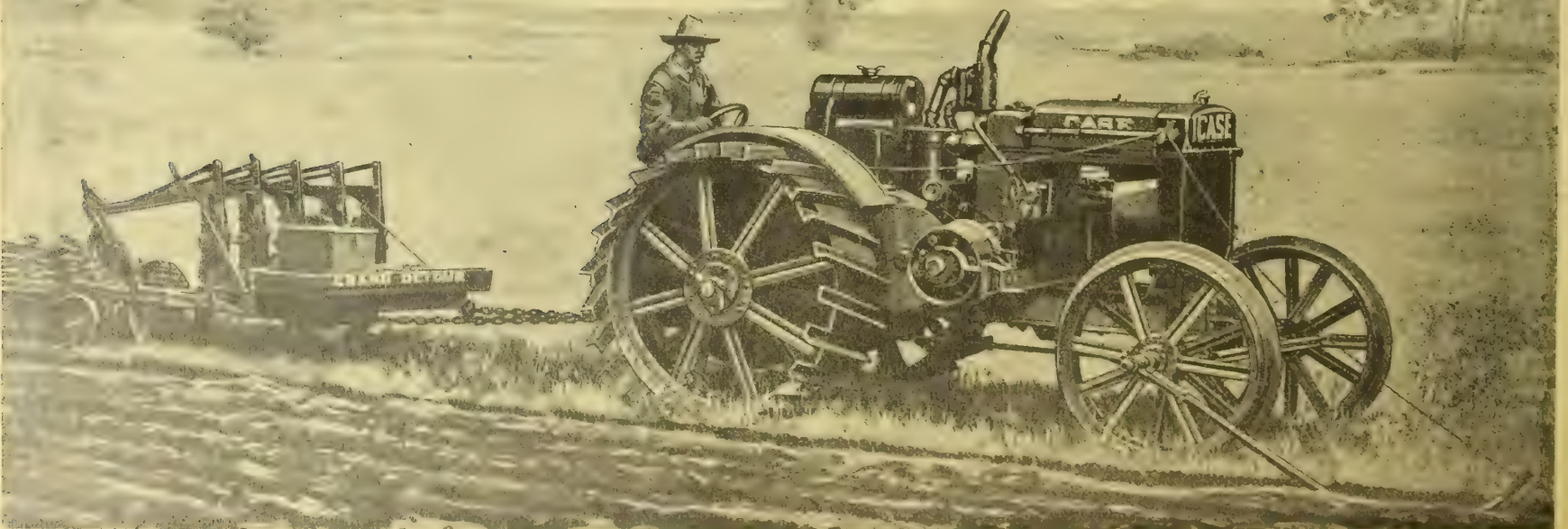
In localities where farming is conducted on a more normal basis, but where plowing is considered a horse-killing job—pulling through dry gumbo, prairie sod, sage brush, “nigger wool”, hard pan, etc.—*Case Kerosene Tractors* are adding to Case reputation for efficiently handling heavy-duty farm work at low cost. There is no job of plowing too big or too heavy for Case Tractors. *Case reserve power and inbuilt stamina* conquer the hardest jobs.

Threshermen and power farmers who are users of Case Kerosene Tractor power are capitalizing on the *ability and adaptability* of Case Tractors to handle successfully not only belt work, but all heavy drawbar jobs as well. In this way Case owners secure maximum returns from their investments. Perhaps *you* can do likewise.

J. I. Case Threshing Machine Company
Dept. C451 Racine, Wisconsin



NOTICE: We want the public to know that our plows and harrows are not the “Case” plows and harrows made by the J. I. Case Plow Works Company.



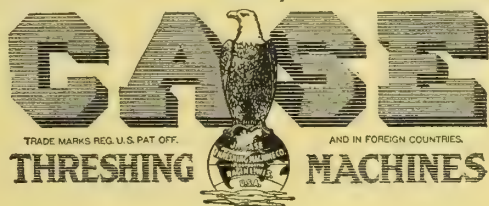
No Job of Threshing Too Big or Too Tough for Case Threshers

IN ALL grain growing sections of the country where big-capacity, dependable, threshing rigs are required, there you will find Case Threshing Outfits in great numbers threshing the crops in record time and building a reputation for unequalled saving of grain and economical operation. There is no job of threshing too big or too tough for Case Steel-built Threshers.

The adjustable straw governor of the new Case Feeder controls the volume of unthreshed grain fed to the cylinder so that it is impossible to clog or choke the machine. The sensitive speed governor admits grain to the thresher only when the cylinder is operated at threshing speed. The heavy Case cylinder with its big, extra strong, annealed and tempered teeth, tears irresistibly through the toughest bundles—wet, mouldy, stack-burned, weed-mixed, or tangled straw. Absence of outer cylinder bands permits use of concave teeth of uniform length, making possible close concave adjustment for complete and effective threshing of grain from the heads without cracking the kernels. Case interchangeable cylinder and concave teeth are a great convenience and economy. One type of tooth fills all needs.

There are excellent threshing opportunities for Case Outfits everywhere. Make the opportunity in your neighborhood *your* opportunity—and let us help you make the most of it.

J. I. Case Threshing Machine Company
Dept. C451 Racine, Wisconsin



Look for the
EAGLE
Our Trade Mark



**Keep the Machines
In Continuous Operation
by Using**

"PALMETTO"

Made to give long, satisfactory service under hard conditions. The small amount of packing required for a stuffing box costs far less than the labor of applying it, and for that reason a long-service packing is economical because it saves labor and keeps the machines constantly employed.

Braided for Rods

If in doubt, let us send you a working sample. No charge.

**Greene,
Tweed & Co.**


Sole Manufacturers
109 Duane St., New York

"PALMETTO"

Twist for Valves



A Fuel Saver



for Your Steam Engine

Here's an arch which possesses marked superiority over the conventional brick arch. It gives a greater generating area, provides a roomy fire box, makes an easy steamer, and, contrary to the brick arch, which requires replacing at short intervals, its firmness guarantees absolute stability and long service.

With the Tubular Arch installed in your boiler you can fire with any kind of fuel, straw, wood or coal, and save from 25 to 40% on your fuel bill.

Stop burning up good, hard earned dollars. Investigate these claims.

The Gugisberg Tubular Arch Co., St. Peter, Minn.

Guarantee

The Tubular Arch is warranted to be made of good material, and to stand 200 pounds working pressure.

U.S. AUTOMATIC INJECTOR



It's the Little Things—

Look to your injector. A small unit, to be sure, but mighty in its usefulness. It should bear the name "U. S." to satisfy you.

The good old U. S. is a true veteran in the steam tractor field, with more than thirty years of service back of it. It is favorably known to manufacturer and operator alike.

Over half a million in service—that's the sales record of the U. S. Injector. Surely there must be very, very good reasons for this wide usage.

Send for Engineer's Red Book which contains many questions and answers relative to steam plants. It is free.

The American Injector Co., 175 14th Avenue, Detroit, Mich.

Women's Department

Now Is Christ Risen

BY NANCY BYRD TURNER

Now is Christ risen from the dead!
Now brightening from sea to sea,
The wistful land is garmented
In ancient beauty wondrously.
Here flaunts a vine, here shakes a horn,
Here rings a blossom's fragile bell,
Here buds a rod, 'twixt night and morn,
Like Aaron's miracle.
So deep the heart of earth is stirred,
Far down, its humblest hoarded seed
Thrills to the echo of the word
That Christ is risen indeed.

How should a violet lift its face,
Safe resurrected, perfect, fair,
And He who fashioned all that grace
Lie dust beneath it there?
How should a trembling tendril stir,
A slender sword-thrust cleave the sod,
And He bide in a sepulcher—
Their Lord and God?
Nay, but an age ago unfurled
One dawn, from out a rock strong riven,
In an old garden of the world
The white, white Flower of Heaven!

O ye who mourn, new graves beside,
That same deliverance shall be
For them, our last great Eastertide,
That shook the slope of Calvary.
O ye who doubt nor understand,
Who see the guarded tomb alone,
For but a prayer an angel's hand
Will roll away the stone.
O ye who know, the dark is fled,
The day is on the hills again;
Since Christ hath risen from the dead
There is no death! Amen!

Reflection of a Thresherman's Wife

WRITTEN BY HERSELF

What is so alluring or fascinating about operating a threshing rig that makes its call as irresistible as the fabled siren's music of old?

It is hard, dirty, filthy work, the hours are long, and the money made out of it is not big—so it can't be any of these that makes it so enticing.

Big money and soft jobs with no work attached always seem to attract the multitude but threshing, as I said before, is neither of these.

But if a thresherman you are once, a thresherman you always remain, and the heart quickens, the pulses leap when the engine's whistle and the soft whir of the separator wheels announces the start of the season's run.

Oftimes you work all night putting in repairs so that you're ready for the next day's job, without having lost any of the daylight's precious hours, or you ride endless miles across country over rough, hilly dirt roads in a dinky little "jitney," going after repairs. You make the trip direct to the factory, yourself, because you can't wait for slower transportation by mail or express.

Next day you tackle your job, fresh as the morning dew—as full of "pep" as a boy of ten!

But if friend wife had taken you to some "society affair" or you had lost only a snatch of sleep being up with one of the kiddies (because they'd eaten too many unripe apples), you'd have been "dead on your feet." Why is it? Can you explain it?

On Sunday, when other righteous folks rest or keep the Sabbath properly by attending church, or at least stay at home with their families, you spend the day washing your boiler or swabbing your flues. Is it from choice or necessity?

There are two sides to this story,

just as there are to any other, and if the thresherman heralds the season with unbounded delight, it is quite the reverse with the little woman left behind to carry on the burden of the farm alone during the long weeks of mid-summer.

When the kiddies get sick and things go wrong generally, as they usually do when once they start, she wishes very fervently indeed that every threshing rig was in Hades!

The cares of farm life for her are increased tenfold, for along with the usual routine of the summer—fruit canning, poultry cares, gardening, etc., etc., she must milk the cows, take the cream to the creamery, water stock, in fact, be farmer, farmerette, mother, father, house-keeper, carpenter, hired-hand and numerous things combined but too numerous to mention.

Then when the cattle and horses break out through that bad place in the pasture fence, as they do periodically, especially when it's blistering hot, it's quite exciting I'll admit, but just a bit too strenuous to be classed as a pleasing diversion!

They've been in the corn and some of them show signs of founder. She hastens to call a veterinary for she wishes to remain blameless should anything happen. Night comes on—the kiddies are safely in dreamland, can she help getting a well-developed case of the blue-devils because she is alone and lonely as she makes specified trips regularly from house to barn. Some of those animals need medicine, you know, and she keeps watch over the sleeping kiddies, too.

Is the game worth the candle? Most emphatically not—she is sure of it—yet does anyone know or care what her opinion is?

Life isn't so enticing, *she* doesn't feel as fresh as the morning dew or as full of "pep" as a *girl* of ten—rather as weary as an old lady of eighty!

But grain must be threshed, for without our beloved thresher folks the world would soon starve, and anyone is unutterably selfish to grumble just because it discommodates him just a trifle. Now don't you think so?

But when you get to thinking, as you sometimes do, of some of the excellent farm-housekeepers who refuse to allow threshermen crews to sleep in their house, because they are too dirty, and of the others who hate to feed them and who scheme around some way or other to get out of it, or shift it onto the other "fellow," well then 'course you can't help but wish your best beloved wasn't in that "business." Threshing bills are slow in coming in, this time, as usual: spring is approaching. The kiddies' clothes are shabby and the wife's are past redemption. She's washed,

pressed, turned and dyed until they've reached the limit of their endurance.

Most every farmer hauls his grain to market direct from the machine, during these days of changeable and uncertain market conditions. Yet some way the threshing bill remains unpaid. Now it isn't because they're poor pay or dishonest. It's pure carelessness—he doesn't happen to have his check book along when he happens to run onto our thresherman or the latter doesn't have his account book along and cannot remember the amount of it.

The thresherman is an honest soul and "pays as he goes." His family is not permitted to buy anything unless they have the money to pay on the spot.

Farmer folks spin by on pretty Indian summer days in their autos, all daintily clad in new fall fads and fancies—but we will stay at home until we can go properly dressed and shod, for the head of the house has a ride all his own. He fondly imagines that there's big money in threshing and that he has the world in general and this neighborhood in particular fooled into thinking that he is getting rich at it. It's one big bluff but, as I said before, there's something alluring and fascinating that keeps them at it—and what I'm trying to find out is—what can it possibly be?

Milk Is in Season

The first law of conservation is—*Use home supplies in season.* Milk is in season, milk is both meat and drink, milk furnishes easy energy to the system, milk has a hundred uses—it may be served as a beverage, a soup, the foundation of the main dish, or turned into a salad in the form of cream cheese, or converted into a dessert. The housekeeper who has an abundance of milk and eggs is rich in resources.

Where skim milk is plentiful, use it in making graham or bran breads; it gives a soft texture to any bread that contains branny material.

Cooking rice, mush or oatmeal with milk not only adds to the food value but improves the dish.

This is the season for cream soups—cream of onion, potato, bean, oyster plant, pea, celery, tomato, corn, spinach, asparagus and a dozen more. In these soups you can use canned vegetables and vegetables not so good for use in other ways, such as coarse celery or potatoes not good enough for baking. Serve these nourishing soups with a light meal.

Make the best use now of dishes made with white sauce. This is the basis of milk gravies, cream soups, croquettes, souffles, scalloped dishes and certain desserts such as corn-arch or tapioca pudding. Cook fat and flour thoroughly before adding the milk. A brown sauce may be

made by browning the fat and the flour before adding the liquid.

For the main dish at dinner or supper at this season combine milk and eggs or milk and cheese and eggs. Use eggs and milk in making corn-bread and muffins and in desserts. Serve less meat when such combinations are made.

For St. Patrick's Day

For a St. Patrick's Day luncheon, while the dishes may be appropriate to the holiday, a unique and economical table decoration can be made to represent a gust of wind that had blown over the table, upturning things in its way.

Attach to the chandelier, or if you have none, hang by strings from the ceiling, several small Japanese umbrellas which can be bought for one cent each. Arrange them so they will look as if they had been turned



Showing Effect of "March Wind."

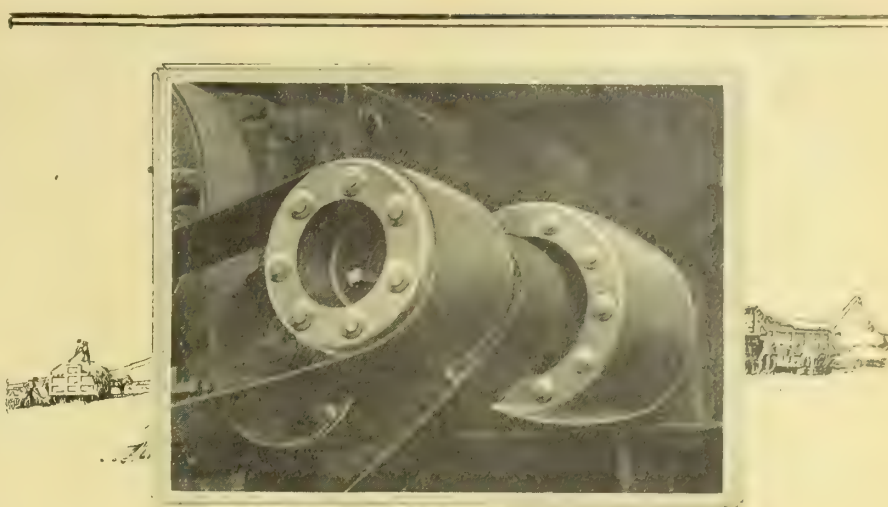
by the wind. From the chandelier or wire to each of the four corners of the table, arrange lanterns so they will look as if they too had been blown out. The center piece can be a small dish of flowers around which Japanese favors are arranged, and, defining the centerpiece, umbrellas that have been blown open by the wind can be used for bon bons. Little Japanese favors, laid prettily here and there on the table, are attractive, and, for a place card, you can show a small child, blown along.

This makes a deviation from the usual green and white decorations.

All Around the Home

We didn't feel like buying new linoleum for the kitchen floor, so we gave the old a good coat of paint and then a coat of varnish, and it was quite a success.

Veils are often merely crushed without being soiled, and will freshen up if laid under a slightly damp cloth, and an iron applied. If dirty, they may often be washed, but this process must be carried out speedily with a warm soapy lather. Squeeze dry, but do not wring. Squeeze and swish through the water, but do not rub. Gently shake, and press into



The owner of this thresher has protected himself against the costly delays of pulley trouble. He has pulled the old "covered" pulleys off his rig and put on Rockwood, 'The Drive Pulley'.

Are You Protected Against Pulley Troubles?

THRESHING SEASON in full swing! Many big jobs ahead of you! Every day, *every hour*, of threshing counts!

Look forward now to these approaching days; think how costly is each delay during threshing. Time taken out because of pulley trouble—when the old "covered" pulley strips again—is real money out of your pocket.

There is no need to suffer such delays season after season. Follow the example of other successful threshermen—pull the troublesome "covered" pulley off *your* rig and replace it with

ROCKWOOD The DRIVE PULLEY

You can't strip the cover of Rockwood, 'The Drive Pulley, because it has no cover. It is ALL pulley—and lasts for years.

Rockwood, 'The Drive Pulley, is recognized by threshermen everywhere as the *only* drive pulley that delivers full power to the thresher cylinder—that insures uniform threshing speeds and eliminates excessive belt slip and belt wear—that gives steady, dependable service no matter how wet and tough the straw may be.

Rockwood, 'The Drive Pulley, is the standard pulley on most of the leading makes of threshers—don't buy a new threshing machine without it.

To obtain Rockwood, 'The Drive Pulley, for your present separator, order through your dealer or we will ship direct. Write today for free descriptive booklet, giving prices, sizes and complete information.

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Ave. - - Indianapolis, U.S.A.

ROCKWOOD, 'The Drive Pulley, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—

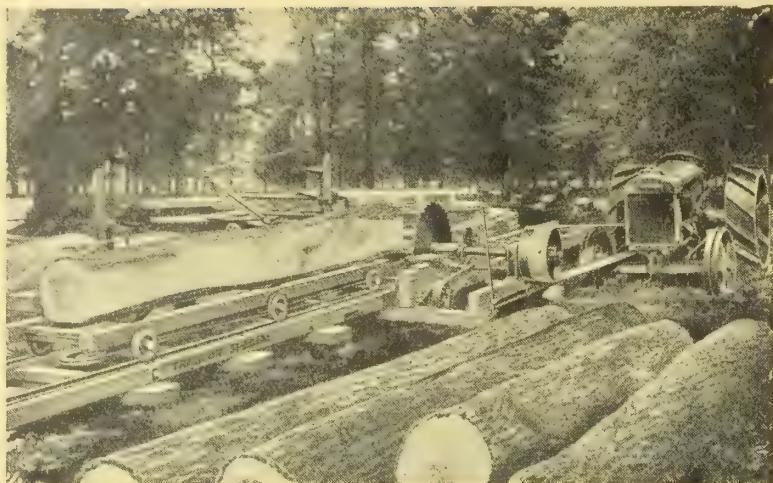


[Section removed to show construction]

a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, 'The Drive Pulley, has no "cover" to strip. It is ALL pulley, and is thoroughly waterproofed.

ALL the Power — ALL the Time
ROCKWOOD, PULLEY SERVICE



"HERE'S REAL THRIFT!"

Saw Lumber during the winter months with an Enterprise "Tractor Special" Saw Mill, and you have found a royal road to thrift. You turn your idle time into cold cash; instead of collecting rust your tractor is earning a dividend; and waste timber land and idle logs are converted into serviceable farm lumber.

Why an Enterprise "Tractor Special" Saw Mill?

It is very simple and sturdy in construction, which makes for great durability and economy in power. There are few parts to keep in repair; it is easily moved and set in position; readily operated without previous experience, and the price is right.

Write today for further particulars

THE ENTERPRISE COMPANY

1050 Main Street
COLUMBIANA, OHIO

Eastern and Export Office
136 Liberty St., NEW YORK

Mention The American Thresherman and Farm Power

shape. If starch is required, gum-water, or rice-water—one made by adding a few drops of gum to warm water, the other by straining the water off boiled rice—are the only permissible stiffeners.

Ants: Bicarbonate of soda sprinkled where ants congregate will both kill and drive them away.

Never keep food in sick room, unless the invalid is left alone and likely to need it.

In making salad dressing, cream and melted butter may be used in place of oil.

If there is a stubborn spot on white paint that can not be removed with soap and water, dip a wet cloth in whiting and rub the spot.

To have fudge of creamy texture place the pan in cold water immediately on taking it from the fire and stir, not beat, the candy with a silver spoon.

Have you ever wondered how it is possible for tailors to make such even buttonholes in rough goods? The outline of the buttonhole is stitched on the machine before cutting. This holds the material flat and the fibers in place. When cut, a thread is run from end to end of the buttonhole as a cord over which the stitches are worked. Following these methods an inexperienced worker can make a creditable buttonhole.

From a City Mother

(The following, from a "city mother" is of interest to those of us who are so fortunate as to have country homes in which to rear our children.—Editor.)

"I sometimes wonder what the city child is able to show in the way of self-dependence and initiative when the inevitable day arrives that he must stand on his own feet. It seems to me that he is never left alone. In well-to-do families he usually passes from the teacher's hands directly into the hands of his governess or tutor, who instantly assumes the responsibility for his safety and well-being. He works and plays under supervision, and has no opportunity to develop initiative or a sense of responsibility. In the name of education we are crippling what we should cultivate. The best way to develop initiative is to let the child alone for at least a part of each day. I think it shows an almost insulting lack of faith in his intelligence, this constant attendance on him. Even if he does make a few blunders, he will be developing himself that way.

"My husband and I were brought up in all the freedom of large spaces, and after a few years of New York apartment life, with summers in

boarding houses, we realized that our boys were going to lose out on most of the joys of childhood unless something was done about it. So we bought for almost nothing a hundred acre valley, two thousand feet up in the Catskills, and five hundred feet above the nearest village—a real wilderness into which no self-respecting servant would dream of setting foot. There was a rough little cabin in it, which was quite adequate for a summer home. Our object was to have a place where the children could stretch their bodies and souls, and incidentally where the parents could also—where light and heat and water did not come by means of taps and buttons.

"We had to do all the work ourselves and the boys, then five and six, were expected from the beginning to do their share. They fetched the milk from the nearest farm, a half mile distant, realizing fully that if they did not get it there would not be any milk, a crisis which could not exist in town. We have most of our dinners outside over a camp fire, which, of course, the boys soon learned to make. They often serve us doubtful meals, over which they labor joyfully for hours beforehand. They have absolute freedom to wander over the mountains with only their dogs for protection. There are hours and hours when I have no idea where they are, and they come home with the most wonderful adventures to recount. For four months out of every year they live the life of the pioneer boy.

"I think every city child should have some such summer experience if possible, where responsibilities can be given him which he may assume or not, but where he must take the consequences. The child brought up under artificial conditions necessarily prevailing in city life, or in the summer hotel, has no point of contact with the old, simple, universal forms of human living, from which all wholesome developments take their root.

The Conscientious Scot

"An enterprising drummer," says a New York business man, "once attempted to bribe an old Scotch merchant by offering him a box of cigars."

"Na, na," said the old chap, shaking his head gravely, "I canna tak' 'em."

"Nonsense," said the drummer. "If you have any conscientious scruples you may pay me a quarter for the box."

"Weel, weel," said the old Scot. "I'll tak' two boxes."

Second Story Worker—"Hullo, Bill. I see you got a new overcoat. What did it cost you?"

Burglar—"Six mont's. I never wears cheap clothes!"

THE "HONOR-BILT" LINE OF SPRAY PUMPS

MANUFACTURED BY

F.E. MYERS & BRO.

ASHLAND PUMP AND HAY TOOL WORKS

175 ORANGE ST.

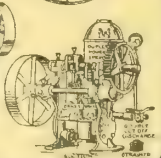
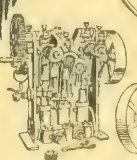
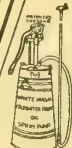
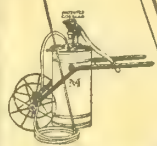
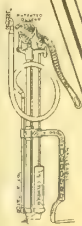
ASHLAND, OHIO.



You are going to spray again in the near future. No doubt you are thinking about it already. Just a question of a few weeks until the weather is right then the fight against the numerous enemies of plant and tree life will be renewed with vigor. Perhaps, your old spraying equipment is about worn out and will have to be replaced with new. Possibly, you will only need a new nozzle or two, a spray gun, some hose or fittings to put the outfit you have been using in good shape and thus make it do for another season.

Whatever your need, be it small or large, it can be satisfactorily met from the MYERS line of "Honor-Bilt" HAND and POWER SPRAY PUMPS and ACCESSORIES for Spraying, Whitewashing, Coldwater Painting and Disinfecting. Regardless of style or size, or method of operation, MYERS SPRAY PUMPS combine efficiency and durability with economy, and thus produce a standard of spraying service difficult to obtain through the use of other spray pumps.

Our new Spray Pump Catalog, No SP21, which not only shows the complete line of MYERS SPRAY PUMPS and ACCESSORIES, but also devotes many of its pages to spraying calendar, reliable formulae and instructions "How and When to Spray," is ready for distribution. Whether you need a new Spray Pump or not, you should have a Myers Spray Pump Catalog to refer to when doing your spraying. Just drop us a card. Without the least obligation on your part, we will mail you a copy, and if you so desire, tell you how and where you can quickly obtain MYERS SPRAY PUMPS—Write today, the 1921 Edition is limited.



FOR SPRAYING, WHITEWASHING, COLD WATER PAINTING AND DISINFECTING.

When You Buy a Threshing Machine—

SEE THAT YOU GET The Grain-Saving Wind Stacker on the threshing machine you buy—or hire. It saves the grain wasted by the threshing machine—puts the grain in the *sack* where it belongs and not in the stack.

This is NOT the ordinary stacker but the *improved* Wind Stacker with the grain trap which catches the grain and unthreshed heads that otherwise are wasted by the threshing machine—blown to the stack—due to faulty adjustments of sieves, improper regulation of blast, excessive speed variations, unfavorable weather conditions, careless feeding, etc.

No thresherman who uses The Grain-Saving Wind Stacker need worry when the farmer examines his straw stack for wasted grain. "There are no green stacks after my threshing, although they are plentiful in the neighborhood where threshing was done *without* The Grain-Saving Stacker," says L. F. Miller, of Brems, Indiana. Farmers everywhere are now *insisting* upon having The Grain-Saving Wind Stacker on their threshing jobs.

"Since putting on the Grain-Saving Wind Stacker this fall, we have threshed 125,000 bushels of grain. We made many tests and think it is safe to say that it saved from one to six per cent of the grain. Some of the farmers say it will *save their entire threshing bill*."—H. T. and O. R. Bornemann, Sioux Falls, South Dakota.

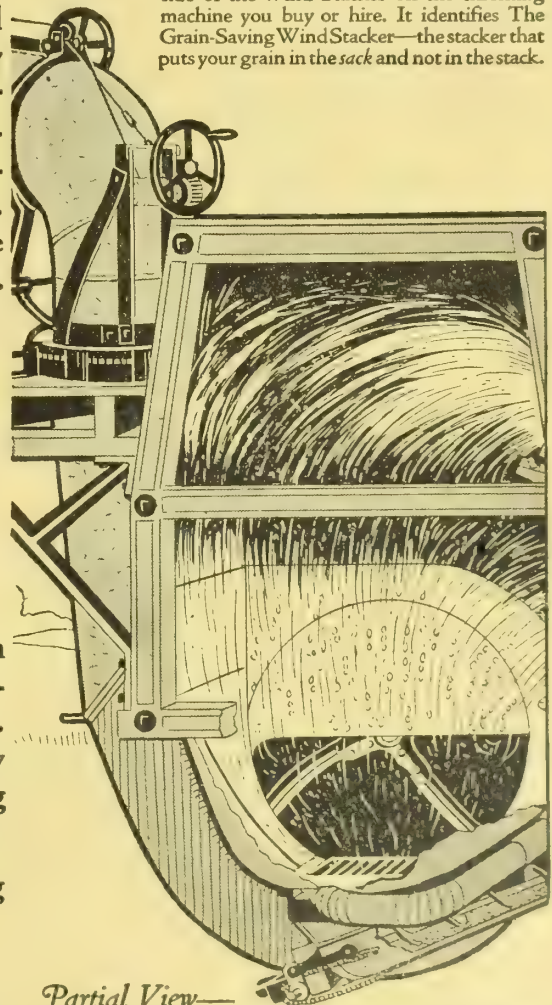
The leading manufacturers of threshing machines in the United States and Canada have adopted The Grain-Saving Wind Stacker. Many supply it exclusively. Others can supply it, if you demand it. It is decidedly to your advantage to do so. Specify The Grain-Saving Wind Stacker. Accept no other!

Ask your dealer or any of the well-known threshing machine manufacturers or their agents.

*The Grain-Saving Wind Stacker originated with
The Indiana Manufacturing Company, Indianapolis, U. S. A.*



See that this trade-mark (in colors) is on each side of the Wind Stacker on the threshing machine you buy or hire. It identifies The Grain-Saving Wind Stacker—the stacker that puts your grain in the *sack* and not in the stack.



Partial View—

looking into hopper, showing grain trap near stacker fan; also auger running from underneath trap for returning saved grain to the separator.

The GRAIN-SAVING Wind Stacker



5 Great Novelties 20 cts.

AUTUMN GLORY. A new hardy plant. The most showy Autumn bloomer, surpassing all others. It is the latest to bloom, showing its full glory after frost has killed all tender flowers. Greatest novelty in twenty years. Succeeds everywhere, reaching perfection the first season from seed, and continues blooming for years. 20 cts. per pkt. With each order we send one trial packet each of: **PINK WOOLFLOWERS,** new—nothing can surpass the mass of pink flowers which it shows all season. Blooms in 3 to 4 months.

DAHLIA LORD GOFF, lilac pink, in great profusion. Blooms in 3 to 4 months.

JAPAN IRIS, new hybrids of all colors. Magnificent. **DIENER TOMATO,** grows to weigh 3 lbs. As smooth and beautiful as an apple. Most starting new vegetable.

And our Big Catalog, all for 20 cts. Big Catalog, free. All flower and vegetable seeds, bulbs, plants and new berries. We grow the finest Gladioli, Dahlias, Cannas, Irises, Peonies, Perennials, Shrubs, Vines, etc. All prize strains—many sterling novelties. **JOHN LEWIS CHILDS, Inc.** Floral Park, N.Y.



Foremost Among Better Grinders

Crush and grind all the grains that grow. Fine for hogs or moderately coarse for cattle feeding.

Strength, durability and service radiate from every line of these powerful mills. Simple but effective in adjustment. A strictly high grade piece of machinery for the farmer or miller.

Light Running—Long Life—Extra Capacity Cone-Shaped Grinders

It pays well to investigate. 10 sizes: 2 to 25 H.P. or more. Write today for FREE catalog.

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SOUTH BEND, IND.

YOU want the most effective—most economical method of operating your belts, with the minimum of slipping—least wear on belts and bearings—greatest output from power generated. You have this if you lag your pulleys with



Washington Superior Pulley Covering

It wears a long time and keeps its belt grip until entirely worn from the pulley. Has been used by many progressive threshermen since 1902. Any careful man can apply it. Write for sample of fabric and prices today.

W. S. RAYMOND, Mfr.
708 Chicago Rd. Niles, Mich.

Write at Once for this Money Saving Book

Valuable book for threshermen. Tells how to get more power out of your steam engine without adding a dollar to your running expenses. Tells how you can thresh 200 to 300 more bushels a day. Tells how you can cut down your coal, oil and water consumption. Write for it now.

A postal will do. Just state the make of your engine, horsepower, whether double or single and say "send your free book for threshermen."



Jim's Lesson on Motor Precautions

BY S. H. FRANKS

WELL, Billy," said Jim, after he had finished breakfast, "is the Floyd all ready?"

"Sure," answered Billy. "Fixed her all up last night."

"Gas, oil, water, tires pumped up, and everything?"

"Yep. Looked at the gas first thing, about eight gallons; filled the radiator and put in a quart of oil—that filled the crank case full."

"How was the oil? And why the gas first? That is the last, if you take them in the right order."

"What do you mean, 'How was the oil? Didn't I say 'full'?"

"Quality, not quantity, old son. All the oil in the world will not keep the motor from wearing out if it's not good."

"Well, Jim, we buy good oil, don't we? and I'm no darned chemical laboratory that can tell good oil from bad by looking at it."

"Who said look at it?"

"How else are you going to tell?"

"Feel of it, of course. Drain a little out of the crank case on your fingers and rub them together. If it feels thick and slippery, it's O. K. If it feels just like kerosene or gas, that is, thin, and doesn't seem to make your fingers slip, it's no good."

"Why is it N. G., Jim, and how does it get thin? I should think it would get thick and gummy after it had been used a while."

"When you start your motor up in the morning, or after the car has been standing a while, it is cold, isn't it? And your gas doesn't all vaporize. Some of it deposits on the cylinder walls and leaks down by the ring into the crank case. Clear so far, Billy?"

"Sure, I see how the oil gets thin. But why isn't gas and oil mixed as good as straight oil? They are both refined out of the same stuff, so why don't they both lubricate?"

"Will they both burn?"

"No."

"Then why should they lubricate? Oil doesn't keep a motor from wearing out because it's slippery, as most people seem to think, but because it really keeps the parts from touching to a great extent; in other words, it keeps them from rubbing directly against each other, if it's in good condition. If it is thin it squashes out from between the parts and lets them rub against each other and wear. See?"

"Sure. What should you do then? Add a heavier oil to thicken it up again, or drain it out and throw it away?"

"Drain it out; but you don't have to throw it away. Long after it's too thin for the motor it's good enough to use on spring leaves, rocker arms, and on the brake rigging—in fact,

it's far better for use in the joints of the brake-rods and levers than new oil. The stuff that leaks by the rings is about half oil and half kerosene, so you see it not only keeps the joints oiled but the kerosene cuts any rust that may have formed since you oiled them last. See?"

"Sure. It seems to me the gas is more important than the oil or water, though, Jim, because if you run out of gas you stop then and there, but if you run out of oil or water you can run a while, then stop and let her cool down again, then go ahead, and keep that up till you get somewhere and can tank up."

"Well, if you run out of gas you stop all right, Billy, but there's no harm done except the inconvenience, and generally you don't have to wait long until some one comes along; while if you run out of oil or water you may not know it until too late. You may get where you started for, but you will be sorry for some time afterward, believe me. Even if you try your system of running and stopping to cool your motor, you may ruin it beyond repair."

"Well, if oil is the most important, what comes next? Water?"

"No. There is no first choice between water and oil—you've just naturally got to have both, although you can get along by running a few feet at a time and waiting for your motor to cool down if you are out of water, so I guess water would really come second to oil in that case. The next, of course, is tires."

"Say, Jim, what would you take along if you were going on a long trip so you wouldn't get stuck in the mud or on the road, or from a breakdown?"

"Why, two cars, Billy."

"Aw, you know what I mean, spare parts that might break on the road and so forth."

"Say, do you know that about any part of a car can break on the road? If you carried everything you might need you'd have two complete machines—you might run into something and break a wheel, at the same time bend an axle. Springs break, gears sometimes get stripped, batteries go dead, tires blow out, drive shafts break, radiators get smashed; just carry that much and how much room will you have left for passengers? Two or three spare tubes, a spare tire or two, a patching outfit and a few blowout patches, and a couple of spark plugs ought to get you through. A good kit of tools and a fair amount of human intelligence will help more than anything else. Also, some baling wire, better known as 'farmer's friend.' That's

probably the most useful of all. You would be surprised at the number of things you can mend with wire. I know one chap who bought a car here a year or so ago; took a week and a half learning to drive it, and started out happily for St. Paul—he didn't know enough to clean a spark plug or change a tire, and darned if he didn't get through without touching a wrench to the car anywhere. Other fellows will start for Omaha or Chicago and have to overhaul their cars seven times before they get back. The only way to be sure your car is in shape is to put it in the shop and tell them to look it over and give them time to do it. Right there is when they will catch anything that may be going wrong, and you stand a pretty good chance of getting through without any trouble if you have this done. The average owner, however, rushes into a shop and says to the foreman, 'Bill, I'm starting out for the north pole in fifteen minutes. Look my car over and see that everything is in first-class shape, will you?' Or if he gives you a day's notice or so, he will howl and tear his hair if he gets a bill over a couple of dollars. Why, it takes about two hours to oil and grease a car, and do it right, then they expect us to look it over in half an hour, or possibly they will give us an hour."

"What would you do, Jim, if you were going to start for Nashville, in looking over the car?"

"Oh, let's see. If the car had been worked over recently, I'd just look her over to see if anything was working loose, tighten up all the bolts on the frame, springs, motor, and so on; see that the battery had plenty of water and good charge; change my oil in the motor, see that the differential, transmission, and universal joints had oil; and go over all the grease cups to see if they were feeding, and fill them all. I'd also graphite the springs. Then I would look over my tires and see if there were any cuts that needed vulcanizing, and look the spare tubes over to see that they were all right. If I didn't have any spare tubes, or the ones I had were getting old and brittle, I'd get some by all means—a driver ought to have one or two extra tubes besides those in his spare tires. Another very handy thing is a blow-out patch. Next the skid-chains ought to be seen to and any cross chains that were badly worn should be replaced. A shovel, an axe, and possibly a rope block-and-tackle, or one of those new-fashioned chain-blocks, would be about all the emergency stuff I'd carry. Of course, I'd take a good kit of tools—the best I could get. Besides the tubes and

uses and spark plugs we have already spoken about, I'd take a flock of bolts and nuts, different sizes. If the car had battery ignition, I might possibly take a set of dry batteries in case the storage battery went 'flue'."

"Aw, rats, Jim, I know better, you wouldn't take a thing. You're just that kind."

"Well, perhaps not. If I started out on a trip I'd probably put a pair of pliers in my hip pocket, take my foot in my hand and wander forth trusting to luck; but that's what I ought to take, and what the average tourist who shows signs of human intelligence does take. There are some who don't take anything, and others who look like a transcontinental truck, they're loaded down so. Generally they put everything they can think of on the car until the frame rests on the axle, and they have to use a periscope in order to see over the junk they have on board. Such people are sure to break down because they are overloaded so badly the car won't stand it, and the chances are, when they do break down, they either break something they haven't got or that they haven't the tools to fix. There is no sense in taking along a lot of spare parts, when you can get them in almost any town. If they haven't them there you can wire for them. Anyway, it's impossible to carry enough tools in the car to overhaul it and still have any room left for yourself. Of course, the fellow who takes nothing along in the line of either tools or 'spares,' is just as foolish as the man who tries to carry an extra car. The best thing to do is to try to strike a happy medium. For instance, there is no use in taking an extra axle along if you haven't the tools to take it off or enough jacks to block the car up so you can get the axle out from under the machine."

"Sounds reasonable, Jim. What else would you do if the car hadn't been overhauled for some time?"

"Set up the rods, put in new rings, grind the valves, look over the oiling system, carburetor and ignition."

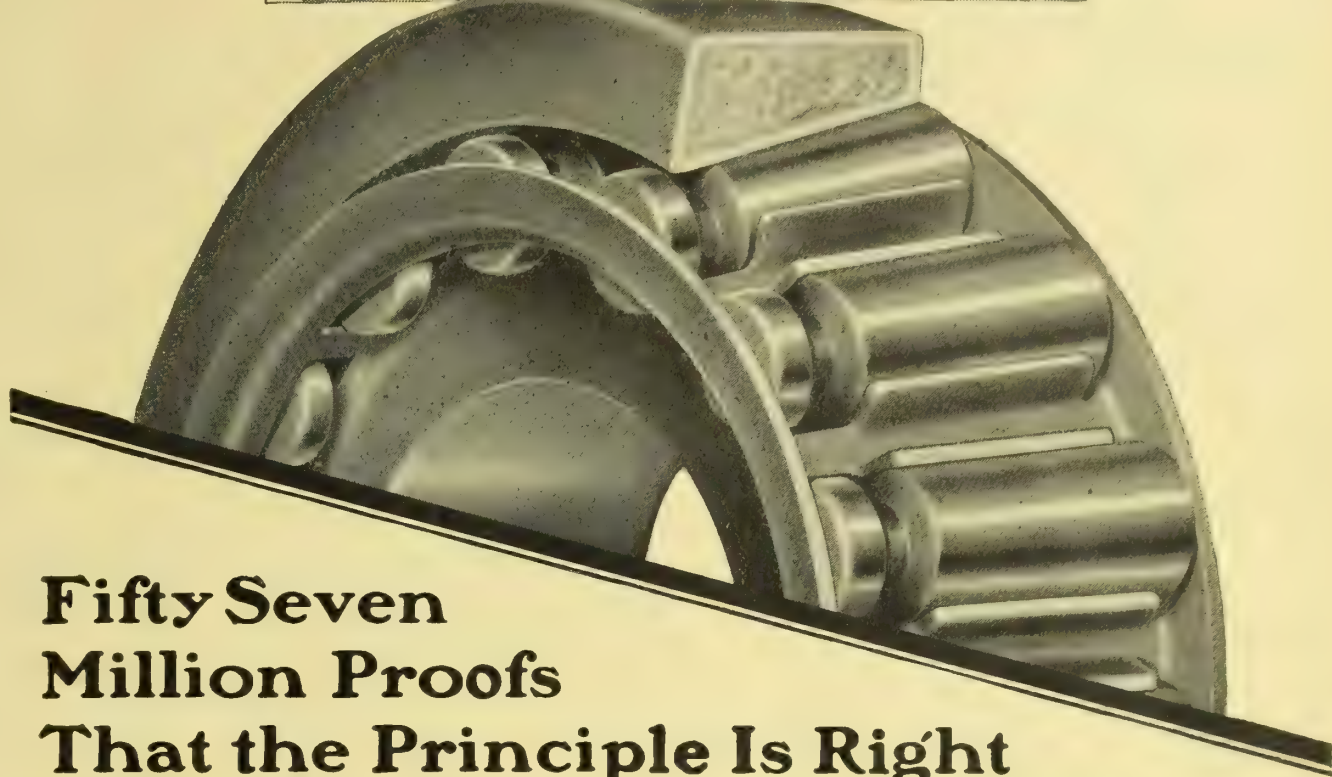
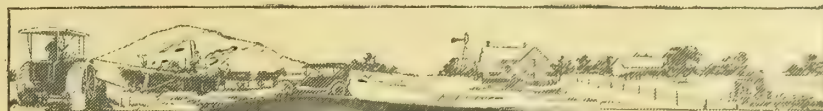
"How about checking up the alignment of the front wheels, Jim? Wouldn't you do that?"

"Sure, that would be included under inspection."

"How do you line them up—parallel, or toe in or out?"

"They ought to toe in slightly—that is, be about a quarter of an inch closer together at the front than they are at the rear. Anywhere from three-sixteenths of an inch to three-eighths is close enough. Now that we've spent half an hour deciding what we ought to do on a long run, let's go out and see how far from home we can break down on a short run, which is all we'll be able to do in what little time we have left."

TIMKENS MEAN - MORE *and* BETTER FARMING - BY POWER



Fifty Seven Million Proofs That the Principle Is Right

Since that day more than twenty years ago when a Timken Tapered Roller Bearing was first installed in a motor vehicle, the principle of Timken Taper has remained unchanged.

Yet during those years, American and European manufacturers have used more than fifty-seven million Timkens. And, as far as we know, not one of those fifty-seven million Timken Tapered Roller Bearings has ever been replaced by any other bearing.

Fifty Seven million Timken Bearings! Twenty years of service! Not a single Timken that we know of replaced by any other make! Hardly a tractor, truck, or automobile in America today that does not boast of its Timkens!

Could one ask for more convincing evidence of the correctness of the principle, design,

and construction of Timken Tapered Roller Bearings?

Because of their superior ability to carry *all* loads no matter from what angle they are applied—because they carry those loads with *negligible friction loss*—

and because, when the inevitable wear that *must* follow motion does come, a simple adjustment or take-up easily and quickly made, makes them function as if they were new, Timken Tapered Roller Bearings increase efficiency and reduce upkeep whenever and wherever they are used.

Thus do they play their vital part in the development of More and Better Farming by Power.

The Timken Roller Bearing Co., Canton, Ohio

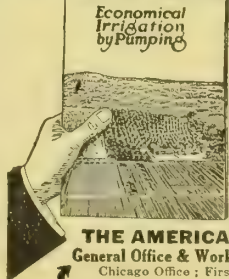
Timken Tapered Roller Bearings for Tractors, Farm Implements, Trucks, Passenger Cars, Machinery, Trailers, and Industrial Appliances

Send for free booklet on "More and Better Farming By Power"

TIMKEN Tapered ROLLER BEARINGS

Mention The American Thresherman and Farm Power

How to Increase Your Crops And save them from drought EVERY YEAR.



THIS BOOK TELLS HOW Sent Free

Contains a lot of useful information and shows how irrigation by pumping greatly increases and insures Crops, especially POTATOES.

THE AMERICAN WELL WORKS
General Office & Works: Dept. 12, Aurora, Ill.
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PREVENT FIRE

This should be the policy of every traction engine owner. It is not enough to provide yourself with fire fighting apparatus—*don't let the fire start.*

South Bend Spark Arresters

used on traction engines and portable sawmill stacks absolutely prevent flying sparks and will not hinder the draught of your engine.

Write us.

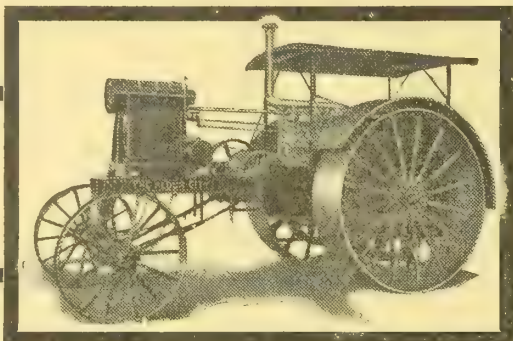
South Bend Spark Arrester Co.

South Bend, Ind.

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FLOUR CITY TRACTORS

The First
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SELL this complete line—a size for every farm and every kind of road work. Each size is equipped with the reliable Flour City valve-in-head motor. Full rated power on kerosene. One standard design—proved right in 21 years of operation in farming—threshing—road work. Write for our proposition to dealers.

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Do You Want High Quality



At a very moderate price? Then get a

BUTLER TANK

The Butler Company
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"NOW-A-DAYS"

says the Good Judge



A man can get a heap more satisfaction from a small chew of this class of tobacco, than he ever could get from a big chew of the old kind.

He finds it costs less, too. The good tobacco taste lasts so much longer he doesn't need to have a fresh chew nearly as often.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco

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Weyman-Bruton Company, 1107 Broadway, New York City

Mention The American Thresherman and Farm Power

Listen To Me

BUCK MCKINNEY

THE procession of prosperity and advancement moves fast and if we don't get up and hustle we will soon be crowded out of the parade.

PROMISE only the things you can make good on. Nothing will build up confidence as quickly as keeping your word good at all times.

THE public will accept you for what you really are, not for what you pretend to be. You may "get by" on "wind jamming" a while but in the end you are known for your exact worth.

IF the country had gone prohibition and old high cost of living had been on the job away back yonder, Belshazzar would have been all out of luck with his big feed and "stew" party.

IT doesn't pay to be superstitious. I heard of a man who wouldn't walk under a painter's ladder, so while crossing the street to get around it he was run over by an automobile and had his leg broken.

LIFE is given to us and also taken away from us and therefore only belongs to us as temporary keepers, and if we expect a good account in the hereafter we must make the best of ourselves we can while we are in possession of it. There'll be no one to "alibi" us at the final settlement.

DON'T ridicule the fellow who is down the scale a few notches. Good breeding will show sympathy for him and give him the consideration due him instead of "poking" fun at him. You might get where he is sometime and then you would know how it makes a person feel.

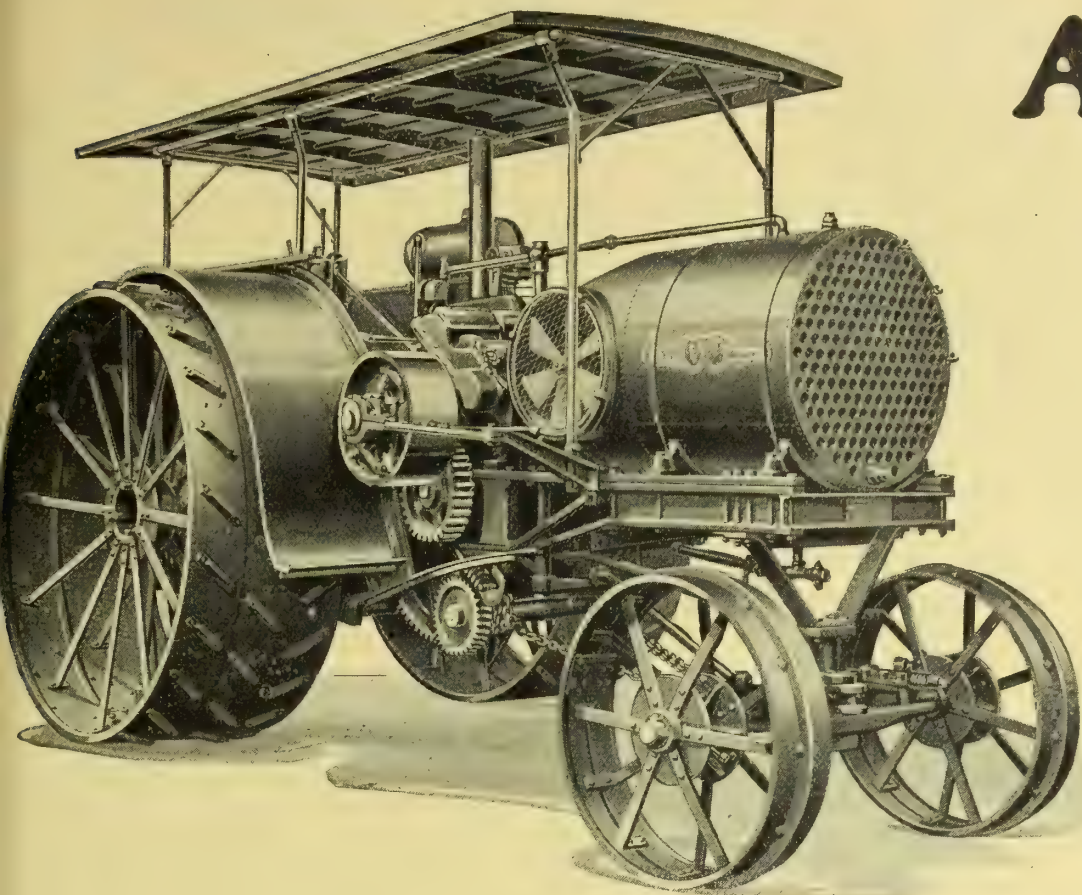
IF you are a gambler you will "fall" for the get-rich-quick schemes that are put up to you, but if you are wise you will stick to the legitimate game of straight, honest business. You won't make your "pile" as quickly as they say you will, but you'll be lots better off in the end. A gambler's money has no home.

WHEN Cleopatra wanted to "four flush" a little she used to melt pearls in vinegar and then drink the decoction. She didn't have a great deal on us at that; when we wanted to put on a parade we would put an olive in a "dry Martini" and lap it up. But, as usual, history repeated itself. They put the "soft pedal" on Cleo's toddy and likewise they have "jarred" us loose from ours, and the world still keeps going on.

PARTNER, life is a funny proposition. We fight to get our breath in the beginning, we fight our way through life to "keep above water," and we fight in the end to get our last breath, yet can you imagine anything better than this old world of ours unless it is the life hereafter? Yet to be able to get a "clearance" on the "unknown sea" we have to fight the "old boy" who is continually camping on our trail. It's nothing but fight, yet it's sure worth the price all around.

THE doctor of medicine and the surgeon are two of the grandest things we have and they are our greatest benefactors, yet just as soon as they succeed in "weeding out" that reprobate who performs illegal operations, just that soon it will not be necessary for the home loving man who has never heard the patter of little feet to ask, "Where are my children?" and the divorce courts will have a whole lot less to do. The little fellows may keep you away from dances, etc., and may cause you lots of work and worry, but, brother, when you feel those little arms around your neck and they cuddle up to you in that all-trusting loving way, Heaven can't be a quarter of a mile away if you have any heart in you.

AT that, you can't blame poor old Marc Antony nearly as much as if he had gotten a square deal. You see, Cleopatra had tried various ways and means to approach him and had been turned down. But she framed up on him and had herself all bound up in a great big bundle of silks and rugs and was taken to Antony, who supposed he was receiving a gift, as was the custom of those days. The bundle was carried in Marc's private office by slaves who proceeded to unpack the bundle and after unwinding and unwinding silk and other cloths, lo and behold, Cleo steps forth from the bundle with just about enough clothes on to bind up a mosquito's leg. Poor old Marc took just one look and then gave the office force the day off, declaring it a holiday. As I said before, under the circumstances, we should be lenient.



AULTMAN-TAYLOR



Better Roads

HERE'S the acknowledged "King of Road Builders"—the Aultman-Taylor 30-60. It is a huge, powerful machine with the brute strength to "carry on" through any road building job, large or small.

—at Less Cost

We will be glad to send you a copy of our new "Better Road Building" booklet which is just off the press. It is full of valuable information of vital interest to everyone interested in road building. Whether you are thinking of buying a road building tractor or not you will find this booklet an invaluable aid in your work. Get your copy now. Write us today.

The Aultman-Taylor 30-60 and its two smaller brothers, the 22-45 and 15-30, will build more miles of road in a given time than any other power—at a saving of from 50% to 75% over horse labor.

Thousands of these machines are in use by township trustees, highway commissioners and other road officials the country over. And their success has been unqualified.

The quickest, best and cheapest way to get good roads in your community is to specify Aultman-Taylor Road Building Tractors in the road building equipment.

Decide now to order an Aultman-Taylor and build more—and better roads at less cost. See your dealer or write to us direct for the full facts.



**The Aultman & Taylor
Machinery Company**
Mansfield Ohio



Asked and Answered

Question of J. R. L. Would you recommend sunflower silage for eastern Wyoming conditions? Would it be practical to drill as for small grain or broadcast, or should the sunflowers be planted as corn? Where can one secure seed?

Answer.—Sunflower silage has not been very extensively used, but it has been experimented with in several states. I do not know whether the Experiment Station in your state has done any work with sunflowers for silage or not. I should suggest that you write to A. D. Fagille, director of your Agricultural Experiment Station, Laramie, Wyoming. He can tell you whether his department has given the matter any consideration and probably can inform you as to what neighboring states have done.

When sunflowers are grown for silage, they usually are put in rows like corn. Sometimes corn and the sunflowers are grown together. I am under the impression that a common silage cutter is used for preparing the sunflowers.

If there is some good reason why some of the standard silage crops, such as corn or kafir, do not do well in your section, it might pay you to investigate and experiment with the sunflower. If, however, the other forage crops can be depended upon, I should advise against any very extensive use of sunflowers. I doubt whether they ever will compete successfully with corn and kafir in any large part of the country.

You should be able to get seed at almost any good seed house. Very probably you will find the seed rather expensive.

Question of G. P. I have a 75-horse power Case engine made in 1912, which

I am using to pull a 36x60 Avery separator. When I begin to feed my machine to full capacity, the engine begins to pull over badly or prime. I have measured the water over the crown sheet through the filler plug, when my engine was on level ground, and I have four inches of water when a half inch shows in the glass. A new cylinder was put on this engine several years ago. I have owned the engine for two seasons. I knew nothing about it before this time. When I first got the engine, I rebuilt it. New rings were put in, I re-aligned it and put on new eccentric hub and sheave. We found that the sheave did not fit the hub as it should, but would bind part of the way around and be too loose the rest of the way. By dressing down the high place in the hub, we improved it greatly, but we did not get the two to fit perfectly. They have worn

down so that now they fit pretty well. In setting the valve, we could not get the lead divided properly for both forward and reverse motion, so we set it properly for the threshing motion. When I put this engine on dead center and move the reverse lever back and forth, the valve stem will move about an eighth of an inch. the first time I move the reverse lever, but after that it will stand perfectly still. I have been told that if I would reduce the size of my steam pipe that leads from the top of the dome, that it would remedy my trouble. Would this not also reduce the power of my engine? I carry one hundred and forty pounds of steam pressure, which is the pressure recommended by the company.

Answer.—The priming of your engine may be due to any one of several causes, but we suspect that it is most likely caused either by the valve being improperly set, or by leakage past the valve or piston. As you have not given the shop number of your engine, and as a change was made about the time your engine was built, we cannot tell whether it has the old or new style valve gear, and so must give instructions for both kinds. The directions for the old style we have mailed you, and the directions for the new style are printed in our book "The Science of Successful Threshing," copy of which has been sent you under separate cover.

The old style valve gear has both valve-rod and eccentric rod connected below the pivot of the rocker-arm, and has the eccentric hub held by set-screws. The new style has the eccentric-rod connected to the upper end of the rocker-arm above the pivot and has the eccentric hub keyed to the shaft.

You will note from the directions, that the old style valve gear should be set with $\frac{1}{16}$ inch slip, and, for the threshing motion, with all the "lead" on the crank end, while on the other hand, the new style valve gear should be set with no slip and with "leads" equal for both motions. Our directions should be followed carefully, for the valve, when set in accordance therewith, will give the best results. The points of cut-off will be substantially equal, and both ends of the cylinder will be doing the same amount of work so that the exhaust will sound even.

If the amount of slip is not the same each time the reverse lever is moved with the engine on dead-center, as you state is the case, it must be due to lost motion, for there can be no other explanation.

After the valve has been properly set, we would suggest that you test the valve and piston for leakage by blocking the cross-head, with the



Saying Nothing and SAWING WOOD
is one of Gandy's characteristics

THRESHING Time is not the only time when GANDY Belts prove their worth by delivering such dependable, satisfying service.

When smaller but equally important jobs loom up—such as WOOD CUTTING, CORN SHELLING, Silage Cutting, etc.—then it is that you will find your GANDY Belt "On the Job" and ready to help dispose of these tasks speedily and efficiently. Their function is to deliver power wherever it is needed on the farm.

Our Engineering Department will be glad to suggest the most effective means by which your power transmission needs may be met.

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Branches:
36 Warren St. New York City
549 W. Washington St. Chicago, Illinois

GANDY
THRESHER BELT

Mention The American Thresherman and Farm Power



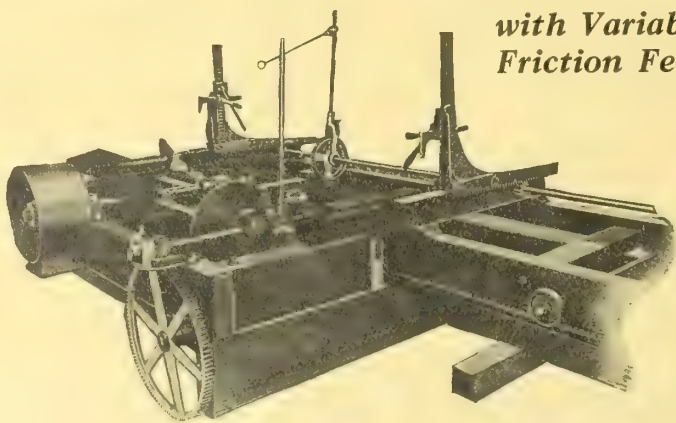
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APPLIANCES
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Dixie "G" Saw Mill

with Variable Friction Feed



America's Most Popular Small Saw Mill

— Thousands in Use —

CAPACITY: 2,000 to 10,000 feet per day with 8 to 20 H. P. Steam, or 12 to 30 H. P. Gas, Kerosene or Tractor Engine.

HILL-CURTIS COMPANY
1504 North Pitcher Street Kalamazoo, Mich.

piston from one to four inches away from the crank end of the cylinder. The cylinder head may be taken off, and then with the reverse lever in its proper position and the throttle open, the amount of leakage can be observed. It can be observed by opening the head end cylinder cock, but it is more satisfactory to see it with its head off as it can then be determined whether it is the valve or piston that is responsible for the leakage.

Reducing the size of the steam pipe would be more apt to increase the priming tendency than to diminish it. The engine must have a certain amount of steam, and if the size of the steam pipe is reduced, it means that the steam must travel faster to get through it, and the faster the steam moves, the more apt it is to carry water with it.

Higher steam pressure helps to prevent priming. If your boiler is in good condition you might increase it ten pounds or so. In testing boilers, it is usual to make the test pressure half again as much as the pressure to be carried; so if you wanted to carry one hundred and fifty pounds, you would test at two hundred and twenty-five pounds.

If you stop the priming, you will probably stop the trouble with the steam gauge. Our experience has shown that the gauge is more likely to be filled with sediment when located over the crown sheet than when on the dome.

In our 80-horse power engine, we use an "anti-priming nipple" which will fit your engine and which you can try if you wish to. It extends down into the dome about three inches below the main steam valve and has holes to make it draw from a large area. Order No. 03797 C, if you decide to try it.

Remember the best remedy for priming is to use the purest, cleanest water you can get, and to keep the boiler clean by frequent washings.

W. F. MacGREGOR,
J. I. Case T. M. Co.

Cause Explained

Unable Seaman—When I come round again the surgeon 'e says to me, "I'm blooming sorry, mate, I don't know what I was thinking about," he says, "but there's a sponge missin', and I believe it's inside yer." "What's the odds?" I says, "let it be." And there it is to this day.

Gullible Old Gentleman—Bless my soul!

Unable Seaman—I don't feel no particular pain from it, but I do get most uncommonly thirsty.—*Cassell's Saturday Journal.*

O'Brien—Oi can say wan thing. Oi'm a self-made man.

Casey—Is it boastin' ye are, or apologizin'?—*Philadelphia Evening Ledger.*



A tractor pays for
TEXACO TRACTOL
just as surely as a team pays for good feed

YOU know, from long experience, how much more work you can get from your horses when you give them better feed.

Do you realize how much more work you can get out of your tractor by using the kind of lubricating oil that suits it best?

Texaco Tractol is made for just one use—tractor engines and bearings. It is the result of years of laboratory investigation and countless tests to find just the right oil that is needed for an engine that runs at full power for long periods of time.

Do not confuse Texaco Tractol and Texaco Motor

Oil. If they were the same we would not make both. Texaco Motor Oil is intended for use in automobiles and motor trucks. Texaco Tractol meets the far different conditions of tractor operation.

Texaco Tractol is an oil that has great lasting qualities—it is an oil that maintains a complete lubricating film under heat that would break up a light oil—it is an oil that discourages carbon by keeping the cylinder walls clean.

Texaco Tractol is sold in 33 and 55 gallon steel drums, in wooden barrels and half-barrels, and 5-gallon sealed cans. Your dealer can tell you what grade your tractor needs.

TEXACO Motor Oil
The uniform oil that keeps your motor active. It is a fine lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.

THE TEXAS COMPANY
Petroleum and its Products

General Offices: Houston, Texas Offices in Principal Cities

4C

Mention The American Thresherman and Farm Power

The Practical Sight-Feed OIL PUMP

Takes the guess out of lubrication and reduces oil bills from 30% to 50%.
Adjustable driving parts make it easy to attach.

Write for catalog A-66 and get our prices.

McCULLOUGH MFG. COMPANY
2632-34 Central Ave. Minneapolis, Minn.
Sold by the Leading Supply Houses

TO Farmers and Seed Dealers.
If your dealers do not sell the **FAMOUS RACINE FANNING MILLS** with bagging attachment which enables one man to clean more grain or seed of all kinds than three men can clean with an ordinary mill, write us for information how you can own one of these mills without it costing you one dollar. **The Racine Fanning Mill** has a seed corn grading attachment which takes out butt and tip grains and enables corn planters to drop from 100 to 400 hills without a miss.

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Manufacturers of Farm and Warehouse and Distillery Warehouse Mills

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Study at Home! Learn Gas Traction Engineering while you earn. We'll teach you by mail while you are working and earning money. Send for catalog. Address
CLARKE SCHOOL OF TRACTION ENGINEERING - - MADISON, WIS.

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"ELCO" ENDLESS THRESHER BELTS

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Every Belt Guaranteed to be First Quality.

This sale will enable us to clean out our stock and give room for a new supply of belts, which will be sold at higher prices.

Get your order in NOW—Limited supply on hand.



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No. on Hand	Length Feet	Width Inches	Last Year's Price Each	Our Sale Price Each	No. on Hand	Length Feet	Width Inches	Last Year's Price Each	Our Sale Price Each
4-Ply					4-Ply				
1	50	5	\$25.97	\$14.70	5	125	8	\$92.75	\$52.50
2	75	5	37.63	21.30	2	150	8	110.24	62.40
1	100	5	49.82	28.20	5-Ply				
2	50	6	30.21	17.10	3	125	7	102.82	58.20
3	75	6	43.99	24.90	2	150	7	122.43	69.30
2	100	6	58.30	33.00	3	150	8	138.33	78.30
2	50	7	34.45	19.50	3	160	8	146.81	83.10
2	75	7	56.35	28.50	2	150	9	152.11	86.10
4	100	7	66.25	37.50	1	160	9	161.65	91.50
6-Ply					6-Ply				
3	125	7	82.15	40.80	1	150	8	165.89	93.90
1	150	7	98.05	55.50	1	160	8	176.49	99.90
3	50	8	38.69	21.90	1	150	9	182.85	103.50
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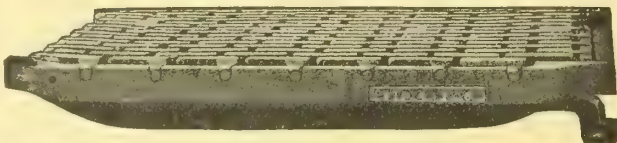
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A poker or fire hook is unnecessary. Cinders are relieved without disturbing the fire bed. The draft is perfectly even through all air spaces. Cinders are burned until brittle and rattle through the grates. The steady draft prevents leaky flues. The fire is kept down near the grates. No hard clinkers to contend with. Increased boiler capacity. Easy firing on clean grates. The maximum heat derived from the fuel. Less ashes and cinders to remove. Poor coal used with good success. Easily and quickly installed.

For prices, give length and width of your fire box.

G.E. Travis Company
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The

"OLD RELIABLE"

NELSON HOOD

for Pneumatic Stackers



First Stacker Hood placed on the market that cleaned the straw of dust and rust and deposited the straw on the stack like a slat carrier.

It has been on the market 5 years longer than any other make and will be there at the finish.

Other later makes of hoods have already dropped out, and the last of them are trying to exist by being furnished free with other goods. Their principles were not right, and the people have found it out.

We are making the "Old Reliable" Hood in the regular size, also in a special small size for the small size separators which have a small blower pipe.

You can get these hoods from your thresher company or order them direct from us. Please write today for catalog and prices.

Nelson Hood Company, Redfield, Iowa

Uncle Silas

WHEN folks get to criticising other folks, they are mighty apt to exaggerate the facts. In the days of his ascendancy in politics Senator LaFollette, then governor of Wisconsin, bossed the job in nearly everything which took place in the state, among other things the building of the new state capitol. Bob's political enemies even accused him of insisting on having the statue of "Forward," on the dome of the capitol, face his farm at Maple Bluff.

THE Jew is always on the job, if he is indeed one of the true faith. In fact, he's generally a day ahead of the robins that come in the spring to partake of the early "night crawlers." There is as much difference between a real Jew and a Sheeny as there is between a Mexican Greaser and a Castalian or between a Dago and a real Italian gentleman. A real Jew may begin life at the bottom but if he gets a toe-hold he'll be there at milking time, and you can bet your last sou marquee on it.

Many years ago a canny young Israelite came from somewhere in Russia to America. He was as poor as Lazarus and as ignorant of the geography of America as we are of that of Russia. He landed in Pennsylvania and thought he was in Wisconsin. Like the English sparrow, he had hardly lit before he began business. By dint of hard work and saving all he made, this descendant from Abraham bought a peddler's pack and started West on foot. Today he writes "Solomon Levitan, president," on national bank notes in Madison.

One of the best jokes that this good natured old Hebrew tells concerning his education in the school of hard knocks took place down in Greene County, Wisconsin, where he got Hail Columbia from a farmer where he stopped with his pack one day. This farmer was a Jew hater on general principles and he called Uncle Sol a Sheeny and a kike and other hard names, as he met him coming out of his home. He said, "You are one of them good-for-nothing, ignorant Jews who don't know enough to come in out of the rain."

"Vell, maybe dat's true," replied Solomon, "I don't claim to know very much, still I chust sold your vife an egg beater for sixty cents dat cost me a dime. In dis vay I manage to make both ends meet, you know."

SILE, to John, Governor of Wisconsin, greeting: Thou wast not elected by my vote nor by my assistance. Of a truth, I did try my durndest to "douse thy bobber," but in vain. I like not many with whom thou trailest and who are of thy preference. They are neither of my political faith nor of thine, nor of any other, excepting for the offices and the usufruct thereof. Therefore I have written thee in the beginning of thy reign as I have written thy predecessors but in vain.

I certified one Emanuel, who long reigned in the land, and who was thy immediate predecessor, and warned him of the "evil days that would draw nigh" if he failed to heed the fate of Lot's wife, who looked back. But Emanuel was a political sucker and many there be who "saw him coming" and, knowing him to be a stranger, took him in. Neither could Emanuel see the joke without a diagram thereto, hence much chaff from the wind stacker of the soothsayer blew over his head and he smiled not thereat, wherefore I ceased to bray when he entered the official stall.

Thou hast proven thyself a truthful man, the first of any governor who ever welcomed a convention of threshermen who did not claim to be one of us. Many governors of many states, preachers and politicians there be, who have lied in convention assembled by claiming to have been threshermen when, of a truth, they knew not the front end of the machine from the tail end thereof. Yet they lied glibly and said unto us, "As my soul liveth, I am a thresherman."

Thou art a boyish looking kid, John, and thy face hath a good look. Verily I never knew thee until thou spilled conversation at our threshermen's convention, after a delayed pass of one hour. Behold thou didst upset the apple cart of the proceedings by talking of Washington to a crowd of politicians, some of whom would seek thy midriff if opportunity presented itself.

In thy talk, Most Illustrious Booster, there seemed the ring of sincerity, insomuch that many Stalwarts gathered there said unto one another, "This man speaketh as one desiring to do right, therefore let us give him a square deal and test the sincerity of our good looking boy governor, even John, who wears a pleasant smile while greeting those who tried to chop down his cherry tree, for did he not greet us on Washington's birthday with words of truth and wisdom?"

Therefore, be it known unto thee, who wears the belt as "big podunk," that in thy pledges to render justice to all men and to try with all thy might to reduce the taxes in Wisconsin, that, trusting in thy word, thou shalt have a square deal from the threshermen and they will earnestly support thee in this laudable undertaking. Thus saith the oracle.



"The Great Minneapolis Line"



Steam Engines

Gas Tractors

Threshers

Shellers

WE are now in our thirty-fifth year of building threshing machinery. Not the oldest in years by any means but our growth in that period of time is something to be really proud of.

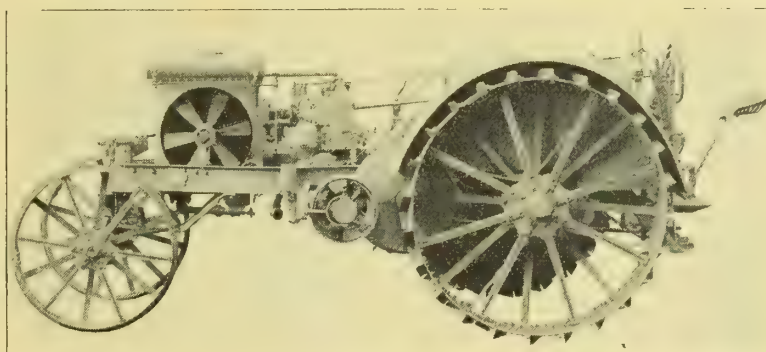
THE GREAT MINNEAPOLIS LINE from the very beginning was popular in the Northwest. Its name and fame spread from year to year until today Minneapolis machines are in general use from the Ohio River to the Rocky Mountains and from the rice fields of Louisiana and Texas to the great wheat fields of western Canada.

Our Best References are our Customers

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just off the press



Power Farming Machinery

Circular is now being mailed—better write for one

The Minneapolis 12-25 All-Purpose Tractor

Better than ever is the All-Purpose tractor for 1921. It is truly an All-Purpose machine—plowing—discing—harrowing—seeding—harvesting—hauling—road maintenance, etc.

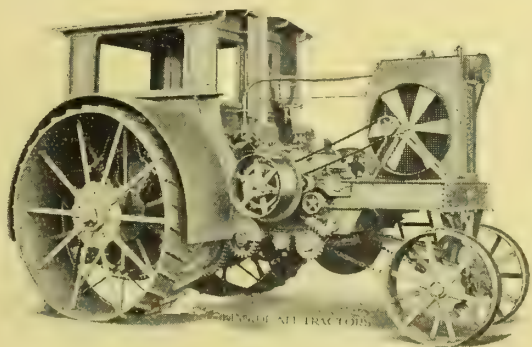
The Minneapolis 35-70 Heavy Duty Tractor

can be relied on to furnish steady power for all kinds of work. It operates the largest threshers with all attachments, pulls ten fourteen-inch plows, handles large elevating graders with ease and at any kind of work it is very economical in fuel consumption and upkeep.

The Minneapolis 22-44 Medium Duty Tractor

is a smaller edition of the 35-70. It handles a 32x52 thresher, will pull a pair of three-bottom plows, and it has earned an excellent reputation in connection with road building. The fuel consumption is unusually low. The upkeep expense is small and great is the satisfaction derived from the operation thereof.

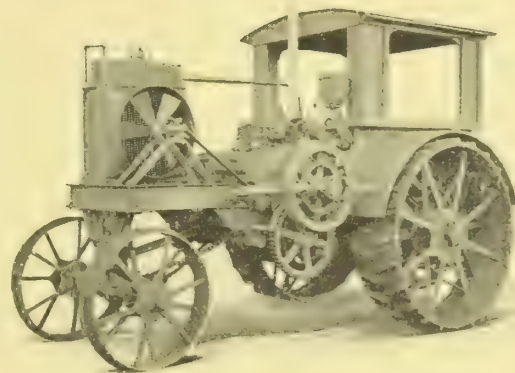
A new size has been added for 1921—a 17-30 General Purpose machine



35-70 H. P.

YOUR copy of 1921 catalog is now ready and will be sent promptly upon receipt of your address.

If you mention the kind of machinery you now own, and request it, a Thresher's Account Book will also be mailed free.



22-44 H. P.

The Minneapolis Threshing Machine Company

Hopkins

(West Minneapolis)

Minnesota

BRANCH HOUSES:

ABERDEEN, S. DAK.
MASON CITY, IOWA
LA CROSSE, WIS.

FARGO, N. DAK.
WICHITA, KANS.
GRAND FORKS, N. DAK.

LINCOLN, NEB.
COLUMBUS, OHIO

SIOUX FALLS, S. DAK.
DECATUR, ILL.

BILLINGS, MONT.
KANSAS CITY, MO.
WINNIPEG, MANITOBA

FOND DU LAC, WIS.
REGINA, SASK.



The Caswell Adjustable Belt Guide

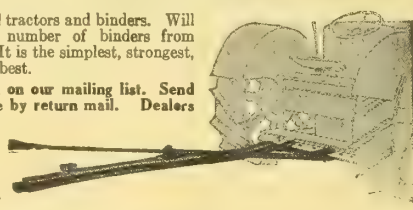
is the standard of America and is superseding every other make. It is adapted to all separators.

The Caswell Hinged Belt Reel swings the belt under the feeder out of the way and out of storms, protected from rain and rot.

The Caswell Automatic Binder Hitches

Adapted to all tractors and binders. Will draw any number of binders from one to five. It is the simplest, strongest, cheapest and best.

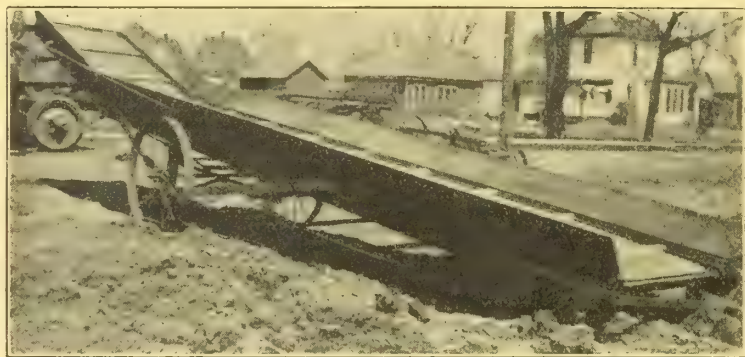
We want you on our mailing list. Send us your name by return mail. Dealers wanted.



Caswell Mfg. Company
120 Vine St. Cherokee, Ia.

Mention The American Thresherman and Farm Power

Threshermen—How Would You Like an Extension Feeder That is as Easy to Pitch Into as This One?



Write for catalog that contains prices and description of this Wonderful Time and Labor Saving Extension, as well as all other supplies that a thresher needs.

Our big catalog is a handy index to every item needed around the threshing outfit—

Rubber Thresher Belts	Stay Bolts	Log Chains
Canvas Thresher Belts	Special Cap Screws	Oils
Seamless Boiler Flues	Special Taps	Low Down Ext. Feeders
	Hose, Belting, Packing	

Let us mail you the catalog. It's free.

GRABER SUPPLY COMPANY

HUTCHINSON, KANSAS

Mention The American Thresherman and Farm Power

Insure Your Employees

The Compensation Act compels you to carry insurance on employes if you have in common employment three or more employes at any one time.

For failure to comply with the Act, you are subject to arrest and a fine of \$25.00 for each day you work without the insurance.

To give you some idea as to the risk you are running, we list a few accidents recently reported and probable cost of settling claims.

Fracture of spine (total disability).....	\$10,000.00
Loss of eye.....	\$ 1,990.00
Loss of hand.....	\$ 2,500.00
Loss of index finger.....	\$ 650.00
Broken leg.....	\$ 200.00

Even though the law does not require you to carry insurance, can you afford to take chances of having an employe seriously injured and be personally liable for damages of such amounts as listed above, when a policy can be secured with us at a very reasonable rate.

Let us assume all your liability. Write us today for application blanks and full particulars.

We are in position to write your fire insurance on machinery. Write for application.

Threshermen's National Insurance Company, Ltd., Mtl.

Commercial Nat'l Bank Bldg. Madison, Wis.

Agents wanted

Organization Notes

(Continued from page 22.)

let the legislature, now in session, know that the threshing interests deserve and expect proper consideration.

E. C. Cadwell, affectionately known as "Old Daddy" Cadwell, journeyed from Halstead to extend greetings and best wishes to the brothers. Ed Jarboe and J. W. Bagenstos, of The American Thresherman and Farm Power, traveled from the Nebraska convention to Topeka and carried greetings from B. B. Clarke to the Kansas brothers.

On the program were a number of prominent Kansans: Dr. S. S. Estey, Mayor H. Corwine of Topeka, G. A. Swallow, and others. The Chamber of Commerce offered its rooms for the convention, also the State Memorial building was available. The threshermen visited the Senate and the House in a body, meeting their home-county representatives and telling them their views on certain road legislation.

One very appropriate thing done by the Kansas brothers was to pass a resolution expressing sympathy for a deceased brother, formerly a member of the executive committee. More than that, a check for fifty dollars was mailed to Mrs. Christianson, just to let her know that the resolution expressed real sentiments. We quote the resolution in full:

WHEREAS, Almighty God in His infinite wisdom has seen fit to call from among us our friend, brother and co-worker, Chris Christianson of Osage City;

Resolved, that the Kansas Brotherhood of Threshermen, in convention assembled, tender their heartfelt sympathy to the bereaved ones, especially to the wife in her loneliness and to the children now left fatherless, and that it commend them to the care of "Him who doeth all things well."

Resolved, that these resolutions be spread upon the minutes of the brotherhood, a copy sent to The American Thresherman and Farm Power, a copy furnished the local press of Osage City, and a copy given to the family of the departed brother. Signed: BY THE COMMITTEE.

Mr. Payne writes that business is so rushing that he will move his insurance office from Oskaloosa to Topeka. Twenty-three counties have been organized and things are moving along fast. At last accounts, the Uniform Vehicle law had not been introduced in the Kansas legislature; but Mr. Payne is taking no chances. He will be on the job if it reaches the floor of the House.

Wisconsin added another glorious page to organization history when threshermen from forty counties gathered in Madison on February 22. The night of Washington's birthday seemed a fitting time to hear Governor J. J. Blaine, the Honorable Charles Whelan and Uncle Silas congratulate the threshermen on the progress they have made during the past year. The University furnished educational films and a moving-picture machine,

together with an operator, and these were used to advantage several times during the three-day convention.

Owing to the resignation of Senator George Staudenmeyer, who has been exceedingly busy with legislative matters, C. C. Doring, vice president, presided at all meetings. Lynn Clarke, secretary-treasurer, had organized a capable staff of assistants, prominent among whom was Bert Larkin, a machinery man whom the threshermen have come to know and love, through long and pleasant associations. Mr. Larkin was busy throughout the convention, enrolling new members, receiving dues, handing out programs and advising strangers in Madison about places at which to "put up."

At the big morning meeting of February 23, the threshermen were fortunate in hearing three men who have achieved national prominence in lines which affect threshing interests.

C. P. Norgord, Commissioner of Agriculture, told the threshermen that their help was needed in enforcing the noxious weed law. Many fields of clover, alfalfa and grain are used for seed, where often these fields are full of Canada thistles, crabgrass and other weeds which will propagate themselves in new fields. His advice about cleaning seed and warning farmers against bad seeds was practical.

A. R. Hirst, State Highway Engineer, made a straight-from-the-shoulder talk that did the threshermen lots of good. He let them know, right off the bat, that he was not recommending to any legislature the passage of anti-lug acts. "Wisconsin has \$32,000,000 available for highways in 1921," Mr. Hirst said, "and not a cent of it is burning our pockets. We are spending it only as fast as we can be sure roads, culverts and bridges will be built strong enough to bear the weights they should bear." Wisconsin's record in legislation proves Mr. Hirst's statement that, when drastic anti-traction-engine legislation is recommended, the highway commission points out the small damage these engines do to the roads, as against the tremendous benefit they are to the commonwealth.

George Hambrecht, chairman of the Industrial Commission, gave a practical talk on compensation insurance; what it should cost, whom it covers, how to file claims for protection under it. He pointed out that, where a thresherman employs less than three men, he is not required to come under general liability laws; yet, if he increases his three-men crew (of which he is one, hence only two are employees) by a boy,

employed only for one hour, he at once comes under the three-man limit. Wisconsin threshermen were eager to learn of these details. Mr. Hambrecht was kept busy answering questions from the floor until the weary photographer drove the brothers to the street, where their picture was taken.

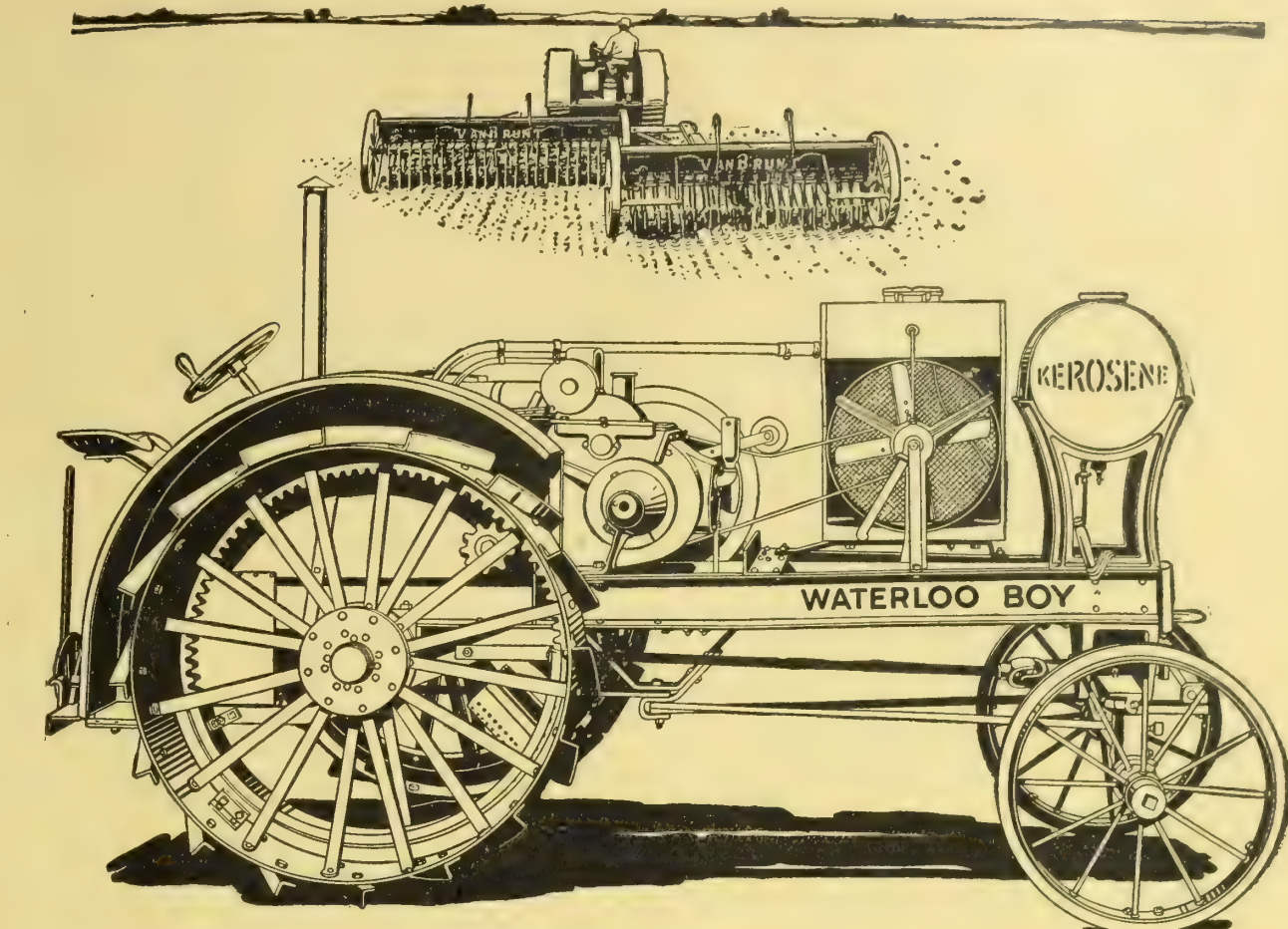
Other meetings were equally interesting. Professor A. W. Hopkins, a fine ex-farmer who is now making farm bulletins attractive at the state university, gave marketing advice. He said the city is "over-sold," the country is "undersold." He also said he hardly knew of a thresherman who is getting an adequate return for his labor and machinery investment. It would be great to have a Professor Hopkins in every college in the nation, for he knows both farm and city life.

A letter from W. H. Newsom, Indiana, was received with enthusiasm. Everyone listened attentively as Lynn Clarke read the virile message of "Big Bill." Discussion of road legislation followed the reading. Brother Landis, a guest from Ohio, told of experiences with road laws in his state. William Prisk, a former officer in the Wisconsin brotherhood, spoke from a rich experience in threshing, road and taxation problems.

Wednesday evening the brothers enjoyed a fine banquet, moving pictures at Turner Hall, and an excellent vaudeville bill at the Orpheum. It was close to midnight before the threshermen could call it a day and evening. During the evening the displays at the convention hall were auctioned off. C. M. Boller, B. J. Larkin, H. M. Hardgrove, W. K. Clarkson and M. Albright not only bid in the articles for sale but then donated them for the permanent use of the brotherhood. Many thanks, gentlemen!

Thursday was devoted to threshing costs and to county organization. J. A. Becker, a federal statistician who reports crop estimates and returns for Wisconsin, had given much work to preparing cost figures for 1920. He was prepared to show the cost per machine hour, the cost per bushel of everything from oats to clover seed, and he used illustrated slides to explain his figures. M. G. Troxell, of The American Thresherman and Farm Power, also spoke on this important subject.

The business meeting after these talks was spirited. An auditing committee and a legislative committee were appointed. Nearly all members pledged themselves to keep a close record of costs during 1921. John Deininger told of attending a meeting where \$15,000 had been pledged to support a law which would prohibit traction engines having cleats from crossing the streets of any fourth-class city. C. C. Doring,



Only \$5 for Repairs in Six Years of Service

THE makers of the Waterloo Boy Tractor do not consider it enough that their product is dependable and gives efficient service. They have built it into another feature which means much throughout the years of its profitable use. That feature is Waterloo Boy economy—not only in the use of fuel and oil, but for general up-keep and repairs.

WATERLOO BOY KEROSENE TRACTOR

Back in 1914 Mr. E. F. Rowe, a farmer living near Hampton, Iowa, bought a Waterloo Boy Tractor. It was one of the earlier models put out by its builders. Its gears were not enclosed, its bearings were of the plain type—it lacked many of the improvements found on the present Waterloo Boy.

Mr. Rowe used his tractor for all his field operations and for most of his belt work. In checking up his expense last fall, he found that he had spent but approximately \$5 for repairs during his six years of ownership. Only \$5 for repairs during six years of dependable, efficient, service. And it is still going strong.

This is but one instance of Waterloo Boy economy. There are many, many others. Improvements on the present Waterloo Boy make it a great deal more economical than the one Mr. Rowe owns. The gears are now enclosed and run in oil, Hyatt roller bearings at all important points reduce friction and add to its long life. Every feature of construction makes for economical up-keep and operation.

Find out what a Waterloo Boy Tractor will do for you on your farm. Try it out. Your John Deere dealer will be glad to co-operate.

The Waterloo Boy Tractor and the John Deere No. 5 Tractor Plow make a reliable plowing outfit.

Write for a folder describing the Waterloo Boy fully. Also ask for Better Farm Implements, a 114-page book illustrating and describing the John Deere full line of farm tools. It's free. Address John Deere, Moline, Illinois, and ask for Package WB-72.

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

vice president, urged tact and caution in using city streets, so that no needless opposition to threshermen is aroused.

After nominations from the floor and proper balloting, the following officers were elected: C. C. Doring, president; John Deininger, vice president; Lynn Clarke, secretary-treasurer.

Constructive work towards county organization was taken ere adjournment. The work will be pushed vigorously. An inter-county meeting at Green Bay, in the northeast part

of the state, will likely be held soon. The following resolutions were adopted:

Recognizing the splendid work performed by A. R. Hirst, as State Highway Engineer and,

Recognizing and appreciating the wonderful improvement in the highways of the state of Wisconsin during his administration and,

Noting that his resignation as highway engineer has been tendered because of inadequate compensation for members of his staff, whereby he has and is unable to maintain an organization of proper efficiency and,

Realizing that only with a strong organization, composed of thoroughly trained and skilled men we can make sure that the vast sum of money now available

for highway work will be judiciously expended,

We, the Wisconsin Brotherhood of Threshermen, in annual convention assembled, do respectfully petition and urge the members of the state legislature now in session to carefully consider matters as presented by Mr. Hirst, to the end that a proper solution may be found for meeting and improving conditions now existing in the state and county highway organizations, and

To the further end, that the state of Wisconsin may continue to enjoy the services of Mr. Hirst as state highway engineer, whom we most respectfully request to reconsider his resignation.

Having read and reviewed a proposed measure known as the Uniform Vehicle Law and,

Realizing that such a measure if enacted into law would work a severe hardship on

Sows Wheat from His **PORT HURON** Without Recleaning

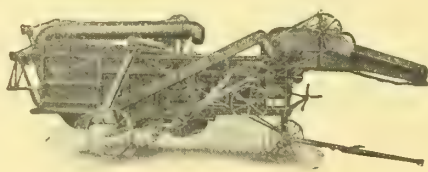


Write
Us

Write
Us

OUTFIT OF FRED H. CLAY, CHARLOTTE, MICH. READ MR. CLAY'S LETTER BELOW

THE Port Huron Rusher Thresher will do fast work and good work and last long. Razor Back teeth made of tool steel with wearing edges tempered, hold their shape and thresh clean. We guarantee them against breakage during the entire life of the thresher.



The famous Mule-Kick Separation bats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing. Five sizes. Get our free catalog.

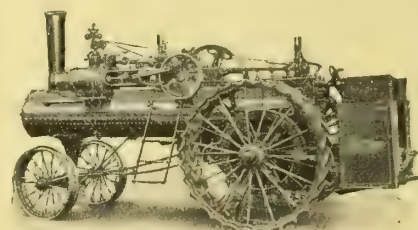
FRED H. CLAY, Charlotte, Mich., successful farmer and thresherman, wrote us on Dec. 3, 1920, as follows: "The 19 H. P. Longfellow High Pressure Compound Engine and the 33x54 Rusher Thresher purchased of you last spring are satisfactory in every way and are all you claimed for them.

"The engine is smooth running, is easy to fire and to handle, has plenty of power and is very economical in the use of coal and water.

"The thresher does its work well. We have threshed oats at the rate of 425 bushels per hour with ease. I took my own seed wheat from the bin just as it came from this thresher and sowed it without any recleaning, and it was as clean as any I ever had recleaned. My customers all compliment the good work I did for them. I have run and worked with a number of different makes but if I was to buy another thresher or engine they would be Port Hurons."

(Signed) **FRED H. CLAY**.

PORT HURON Longfellow High-Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market



today. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them. Two sizes. Catalog free.

PORT HURON ENGINE & THRESHER CO. PORT HURON, MICH.

Port Huron Co., of Ill., Peoria, Ill.
Port Huron Mach'y Co., Ltd., Lincoln, Nebr.

Port Huron Mach'y Co., Ltd., Des Moines, Ia.
Port Huron Engine & Thresher Co., Logansport, Ind.

BRANCHES:

Port Huron Engine & Thresher Co., Wichita, Kans.
Port Huron Co., of Ill., Moberly, Mo.

Port Huron Mach'y Co., Ltd., Minneapolis, Minn.
Foreign Trade Office, 24 State St., N. Y. City.

Mention The American Thresherman and Farm Power

the threshermen of the state and would seriously interfere with the proper performance of their work, therefore be it resolved that

We, the Wisconsin Brotherhood of Threshermen, in annual convention assembled, go on record as opposed to the proposed Uniform Vehicle Law in its present form or any amended form unless when so amended some of its present features are substantially changed or eliminated therefrom.

The thanks of the brotherhood be extended to those who have so splendidly contributed to and assisted in our entertainment namely,

To the governor of the state for his hearty and cordial welcome,

To dear old Uncle Sile, the Daddy of thresher organizations, for his assistance and help not only during the convention but throughout the entire year,

To the various speakers who have addressed us and freely given of their time,

To the officers for their splendid and efficient work,

To our visiting brothers and friends and

To each and everyone who have by word of mouth and by their presence aided us in meeting the problems which have confronted us, and in every other way assisting to make our annual meeting a success.

Dated this 24th day of February, 1921, at Madison, Wisconsin.

WM JELLINGS,
CHAS. E. TEWS,
ROLAND MYERS,
Committee.

Health and Wealth

"Dr. Pillers seems to be a fashionable physician."

"I should say so! He has patients at some of the most expensive health resorts in America and a waiting-list of people whose health will give way as soon as they get money enough to consult him."—*Birmingham Age-Herald*.

Preventing Automobile Fires

BY B. H. WIKE

Quite often an insurance company finds things about the burning of a car that look suspicious and court investigation. This investigation is usually based on the fact that the burnt car came to its end by flame applied purposely, as certain tell-tale evidence may show. Anyone attempting the destruction of his car simply to get the insurance and so perhaps get more than he could by selling it outright is going to encounter trouble in proving the fire happened of its own accord. Like murder, car burning will out. Cases have been known—one in particular comes to mind—where the owner had his car insured in two companies and so above its real value. His car was found beside the road, burned. Certain suspicious signs that accompanied the circumstances of this burning the owner never was able to explain well enough to cast off suspicion, and so the insurance company took it to law to make an investigation. The result was proof that the car was set afire to collect the insurance.

The foregoing instance does not prove that all cars, when they burn, are set afire by the owner. Far from it. Unless a car owner does not care if things look suspicious, he should take all possible care to prevent fires.

Nearly all insurance policies stipulate that such things as greasy rags shall not be allowed to accumulate in corners of the garage where the car is kept. Neither is it allowable to have cans of gasoline standing within such buildings; but this part is ignored day after day. It is possible to have such things about and a fire never occur, but if flame does spring up and the facts of the case become known, you may have some difficulty in collecting the money. The policy warned you beforehand. Spontaneous combustion is the term applied to self-ignition, caused by the evolution of heat in a substance due to a chemical change in its constituents.

A few rules for behavior around cars are as follows: Never use matches to inspect any part of the car after dark or any other time, but have an electric lamp. Keep the drip pans under the engine free of oil and greasy accumulations. Take care that no loose cables allow their ends to strike places where there is grease or gasoline. If the carburetor springs a leak, have it repaired at once, for gasoline fumes under the bonnet need but little encouragement to leap into flames when a spark occurs.

It is well for every car to carry an extinguisher. These fire fighters cost little and can be carried on the dash. Not alone will they serve

with a car but they can be used in the home as well to put out an incipient blaze. The first cost of these extinguishers is the greatest, for the gun itself can be used again and again, and all that is necessary is to buy fresh charges when the extinguisher becomes empty. New charges cost less than a dollar—very cheap indeed in comparison with loss from a possible fire.

If fire ever springs up while you are on the road with your car, don't lose your head. Very likely, of course, it will begin near the engine, which will mean that it is very apt to start rather close to your feet. If you can find sand to throw on the flame you will find it far better than water. Even dust will smother flame, but sand or sawdust is best. When the flame is extinguished by this means, calmly allow things to cool down and then get as much of the sand off as you possible can. A small hand-bellows is good for this purpose, but not many think of carrying a hand-bellows just for the sake of blowing the sand off their engines after a possible fire.

Finally, don't forget to have your car insured and don't forget what your policy says about your own responsibility. Live up to the expectations of the insurance company and you will have far less to worry over in regard to fires that may consume your car.

RUSSELL

THE OLD RELIABLE LINE

...1842-1921...

Power for Every Need of the Thresherman and Farmer—

Russell Steam Traction Engines never did have a real rival for smooth, even flow of abundant power. Operate threshers at just the right speed to get out most grain with least wear and tear on thresher and engine. Unequalled for road hauling and heavy power jobs.

Russell Kerosene Tractors are backed by our experience in making reliable tractors ever since 1875. Composed only of true and proven features; built to Old Reliable Russell standards of quality and workmanship; and with a big surplus of durability and power. That's why Russell Tractors have no weak points, but stand up under severe service and outlast them all. Built in four sizes with 4 wheels and 4 cylinders—there's a right size tractor for every farm.

Threshers for all Grains, Rice, Seeds and Beans—

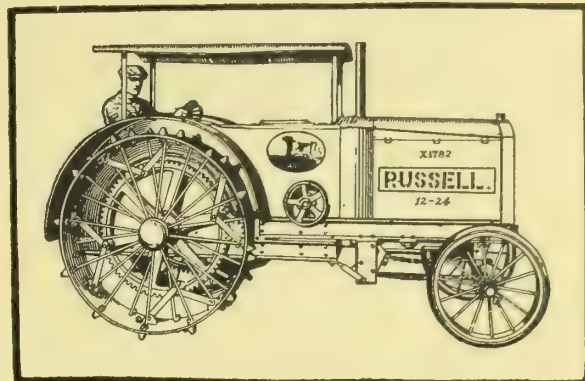
Russell Threshers are the world's best. Exclusive features include the big easy-running 15-bar Cylinder that works tooth-and-nail with the High-finger Grate and gets most of the grain **right there**; and the patented Distributing Beater that spreads the straw evenly full width across the rack and gets out the very last kernels. No other thresher has these features and none other can equal the Russell for saving and cleaning all the grain.

Send for the Big New Russell Catalog.

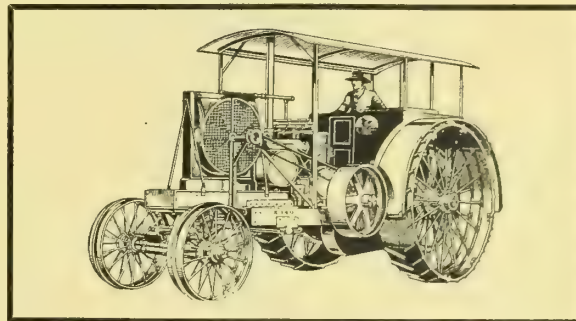
The Russell & Co. Massillon, Ohio

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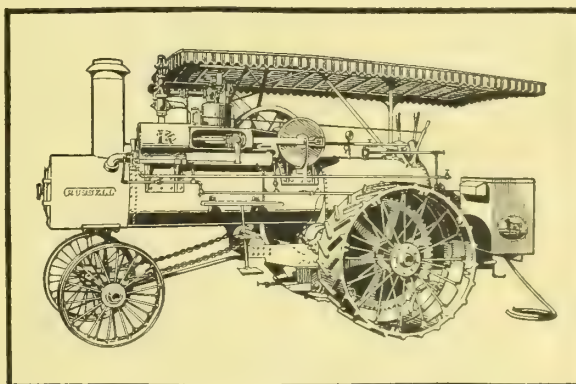
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Indianapolis.....	The Russell & Co.	Wichita, Kans.....	Geo. O. Richardson Mach'y Co.
Portland, Ore.....	The A. H. Averill Mach. Co.	Minneapolis, Minn.....	F. P. Harbaugh Co.
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Sioux Fall, S. D.....	The Clark Implement Co.	Goshen, Ind.....	The Arbuckle-Ryan Co.
		Milwaukee.....	Lindsay Bros.



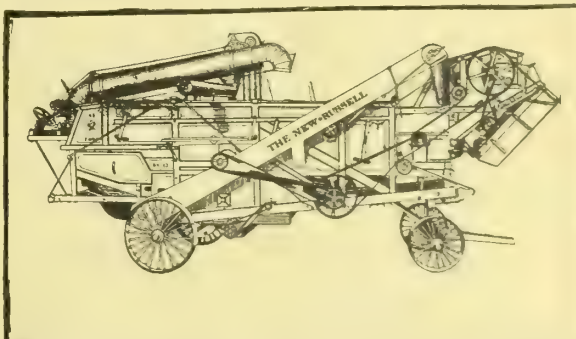
Russell Tractors of this type are built in 12-24, 15-30 and 20-35



Russell Giant 30-60



Russell Steam Traction Engines are built in 5 sizes



Russell Threshers are built in six sizes, 20x34, 24x43, 27x46, 30x50, 33x54 and 36x60



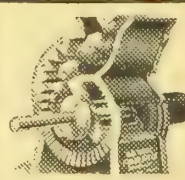
Insyde Tyres



Inner Armor for automobile tires. Used over and over again. Will not heat or pinch. Positively prevent punctures and blowouts. Guaranteed to Give Double Tire Mileage. Easily applied without tools. Low priced. Big savings. Agents wanted in every country. Special terms.

AMERICAN ACCESSORIES CO., B. 1303 CINCINNATI, O.

Mention The American Thresherman and Farm Power



Limestone Pulverizers
Sold direct from
Factory to Farmer
Write for catalog
O. B. Wise Pulverizer Co.
Knoxville, Tenn.

The "Machine" that "Walks" as it "Works"



By using this machine when filling the Silo, from 20 to 40% more fodder can be stored at the first filling than by any other method. Two men are required, one to handle the distributor, the other to guide the machine. The fodder is packed even and firm, stepped on everywhere in all parts of the silo and no loose bunches are left to mold. Steps close to the wall, easy to operate, economical. Especially recommended to groups exchanging help and to owners of cutting outfits. For price and further information, write

WALKING TAMPER CO. WAUSAU, WIS.

Mention The American Thresherman and Farm Power

A Special Offer for 60 Days

A section of land (640 acres) in Taylor County, Wisconsin. All sloping to the south, rich clay loam, running water all the year, woven wire fence with barbed wire on top, 100 acres easily put in cultivation. Pasture alone will pay interest and taxes. \$5,000 to \$10,000 worth of pulp wood, now bringing \$8 a cord at side track, and fencing posts and cross ties, besides an abundance of wood. Ten miles from county seat, gravel road most of way. Rural free delivery right by the tract. School house on corner of section. Will raise all kinds of grain, and best of pasture lands, enough for 250 to 500 head of stock. Price \$50 an acre.

If purchaser will pay as much as \$5000 down, I will buy at market price all the pulp wood, fence posts and fire wood delivered at county seat and credit same on purchase price of property. Can give immediate possession.

This special offer is made for the purpose of finding a customer before spring opens, and no other terms will apply. Every acre will be worth more than double cost price when put in cultivation. Good shack on property for use while improving land.

Address

B. B. CLARKE, Madison, Wisconsin

This offer expires May 10, 1921.

The Presidential Salute of Uncle Silas

WE'VE got the new ship of state headed across the waves on a four years' voyage, with President Harding on board, and with the Honorable Charles Evans Hughes as secretary of state and a fairly representative American cabinet, so it's up to the new admiral to sail his fleet carefully but fearlessly in whatever kind of weather or waters he may encounter, remembering ever that the American people have placed this trust in his hands by the most overwhelming majority ever given any President from the time of George Washington to the present.

If he will be guided, as the American people feel that he will be, by a wise head and an honest heart, putting his trust in the Lord and hewing to the line of righteousness as it shall be given him to see that line, and letting the chips of criticism fall where they may, then indeed may we hope for better things. That this country has been mismanaged to the point of danger can not be denied. That it has been practically run by those who were not elected or ever sworn in as President, for many months, goes without saying, for the President has been incapacitated from performing his duties by illness for two years or more. There should be a law enacted to cover such a contingency, whereby the duties of the President shall fall upon the Vice President. The founders of the government provided for this in creating the office of Vice President but they failed to specifically require it by law in such a case as that which has befallen ex-President Wilson.

There are conditions, graver, if possible, than those of war, staring Warren G. Harding squarely in the face, right in the beginning of his administration. The seas are mined with deadly torpedoes strewn everywhere, over which he must sail his ship, and the wreckage of war litters the pathway of our new mariner, who must keep a sharp lookout for danger, from the first revolution of the engine until it reaches a harbor of confidence and safety.

The hand of greed never stalked abroad as now, nor was crime ever so bold, and never has it permeated through every class and kind as during the last four or five years. One feels indeed that Satan and his host have been loosed and that hell has added its torments to the world in every shape and form. Rascality seems to be the watchword, and murder and robbery and wrong are to be found among the high and low; wherever one turns one finds it there.

Yet, for all this somber gloom which has covered the world and our

own Columbia with this cloud of sin settling down, there is enough patriotism and loyalty and love of country left to bring the nation back to righteousness and to God if those who are entrusted with the affairs of state be true to their trust. The God of Righteousness will prevail and all will be well if we but do our whole duty in spite of temptation and intrigue.

Oh, man that you are, and in whom this greatest of trust has been confided, fail not in your duty to God and your country and yourself. Stand firm, Mr. President, and, as Abraham Lincoln brought the nation out of chaos and disorder to become the greatest nation on earth, stretch forth your hands and bring it back once more to the moorings of the Fathers, without the loss of a single star from its diadem, and the God whom you profess to love and serve will guide you all the way if you but trust in Him and be not swayed by influence or power. Because of the great trust reposed in you, be even more humble, and the Lord will raise up men and women to back you and stand with you that the gates of hell shall not prevail against you. In performing this weighty responsibility if you do your part well, as God shall give you the right to see and do, you will find a hundred million of real red-blooded American men and women who will be with you all the way, and who, if necessary, will go down with you into the valley of the shadow of death and place their lives with yours upon the altar of the country as proof of their loyalty in your hour of need.

Your responsibilities are weighty, your duty plain. In weighing anchor for this important voyage, stay close to God and invoke His aid daily in your great undertaking and forget not this pledge: "That the measure of my affirmation in all things shall be made upon truth, as if standing in the presence of the Holy One."

You cannot afford to be other than just and right in all things as your innermost conscience shall prompt you, if you but try with all your heart and soul and strength to see the right.

In dealing with other nations remember to deal justly and honorably even in the spirit of the understanding. Then fear none, however great or powerful, and, hewing to the line of righteousness, you need not concern yourself about where the chips may fall, for behind you, like an impregnable wall, all true Americans will be found and a nation purged and purified, will call you blessed!

Now is when you need to Avery-ize most

The problem *now* is to raise bigger crops at *lower* cost. *Increased* production and *decreased* expense is *now* more important to you than *ever* before. Getting motor power machinery is the logical, practical answer to your problem.

Only a tractor can give you the *economical* power needed to work your land in the right way at the right time to get the best seed-bed—*speedy* power to take advantage of weather conditions, and hurry up your plowing, discing, harrowing and planting—*tireless* power that can do in hours' work that now takes days—*hardened* power that's ready in the early Spring when power is needed most—*concentrated* power that enables *one* man to do the work of *several* with horses—all of which mean *lower costs*, *bigger crops* and *greater enjoyment in farm life*.

Averys answer this problem for you with a complete line of tractors—seven sizes 8-16, 12-20, 12-25, 14-28, 18-36, 25-50 and 45-65 H. P., all with the "Draft-Horse" Motors which have renewable inner cylinder walls, centrifugal gasifiers, adjustable main crankshaft bearings and the other exclusive features, and the "Direct-Drive" Transmissions—also two small Avery Tractors, the Model "B" 5-10 H. P. and the Model "C" Six-Cylinder. One and two-row motor cultivators that plant and cultivate any row crop, pull plows and do all other kinds of field and belt work. Motor Trucks that save hauling time and expense. Power-Operated Tillage Tools that make real one-man outfits. And Champion Grain-Saver Threshers and Silo Fillers that save crops after you raise them.

Avery Quality Better Than Ever

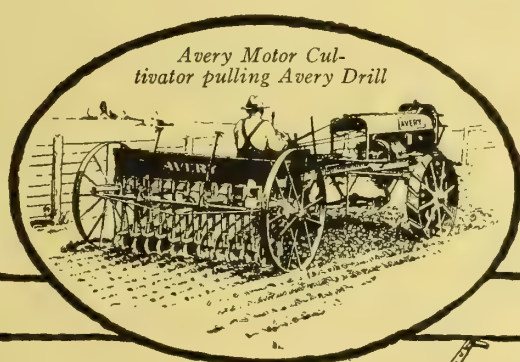
This year the Avery Company offers you the best machines we have ever built in all our fifty years' experience. New factory equipment, improved methods of manufacturing and many refinements in design and construction are enabling us to make the 1921 Avery machines *better than ever*, and at prices which give you the *most for your money*. Avery machines are built *complete* in Avery Factories and are sold through Avery Branch Houses. Their cost is based upon the most economical manufacturing and selling methods known. Satisfied Avery owners in every state in the Union and eighty Foreign Countries say you are not making a mistake when you get an Avery.

Send For The Avery Catalog

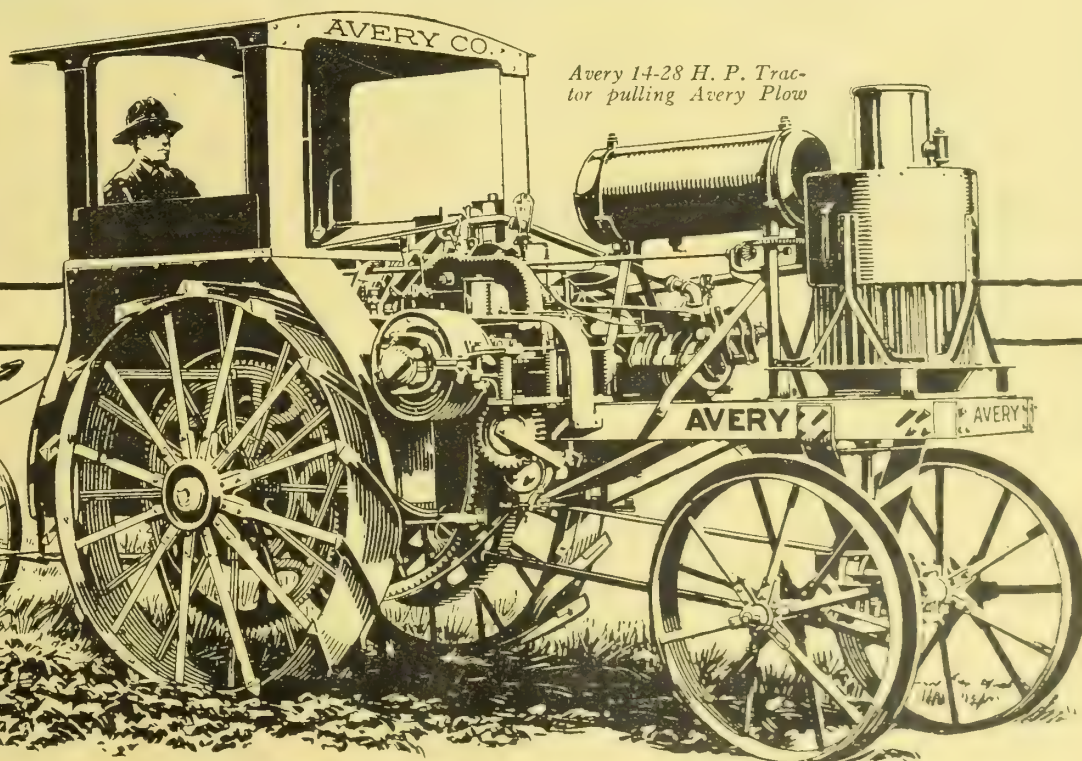
Get the facts on the economy of farming with Avery Machinery. Don't miss the opportunity that Avery-ized farming offers you in growing bigger crops at less expense. To *produce more with less work*; to *feed less and save more*—to make *more money* is the problem in farming this year. The Avery Catalog will help you to answer these problems. This is the most complete, up-to-date book ever published on motor farming machinery. Every farmer should have a copy. Sent free upon request. Write today.

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BRANCH HOUSES: Madison, Fargo, Omaha, Minneapolis, Grand Forks, Sioux Falls, Aberdeen, Billings, Lincoln, Sidney, Davenport, Waterloo, Des Moines, Indianapolis, Columbus, Kansas City, Wichita, Stuttgart, Los Angeles, San Francisco. DISTRIBUTORS: Avery Company of Texas: Dallas, Amarillo and Beaumont, Texas. Also Other Principal Machinery Centers.



Avery Motor Cultivator pulling Avery Drill



Avery 14-28 H. P. Tractor pulling Avery Plow

AVERY

Tractors, Trucks, Motor Cultivators,
Threshers, Plows, etc.



Avery 6-Cylinder Small Tractor

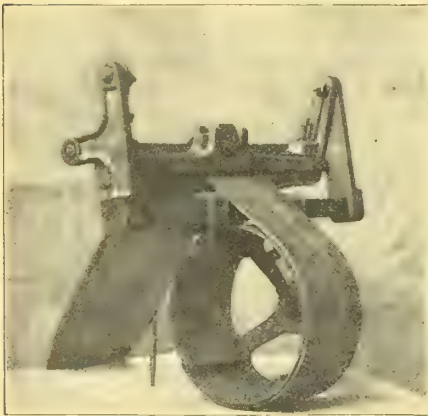
Mr. Fix Fixed It!

Gentlemen: I ordered a pair of valves from you for my Avery Undermounted Double 22-Engine and in 10 days from the time I mailed you the order I had a notice from the agent at the station to come and get my valves. Some service! Well, I knew what I was doing when I ordered your valves because my order is a repeat order. I will say that I installed one of your valves in a little Gaar Scott Class G Engine in 1914 and it made a Big Little engine out of it. The engine has been doing almost continual service since that time and the steam chest lid has never been off since the valve was installed by me. And the engine, by the way, is 19 years old now. The reverse gear has never been worked on since the valve was installed and runs as quiet as can be. Made about 500 pounds difference in the coal per day and one tank of water, as I had the engine overloaded with the old slide valve, and this valve so improved the difference in the engine as to cause the above mentioned results.

I ought to know valve principles and operations as I have run an engine ever since I was 14 years old and have steam licenses from two different states. Never had the misfortune to even as much as having to be waited on for steam in 24 years. All there is to it is to properly equip your engine before you start out and tend to your own business after you start. You can use this as a testimony if you wish. Will say your engine is not properly equipped without it being Baker-equipped.

Yours truly,
Wm. Fix.
Shallow Water, Kans.

Here's a
Lagging Machine
That will do the Work



Fits any pulley from 2 to 14 inches, beveled or straight face. It is made especially for threshermen or for use in any industry where pulley lagging is necessary.
Manufactured by
A. B. GERBRAND Buhler, Kansas

They're All Coming Our Way Now

The Buller Automatic Coupler has made a great "run." From a small beginning a few years ago, it has grown in popularity until today it is recognized as the only practical automatic coupler.

Our liberal plan of allowing our customers to try the coupler right on their own farm for ten days, and then return it if not satisfactory, is making big sales for us and proves that our coupler is everything we claim for it.

Make up your mind to write for the Buller catalog today. It shows and describes the various styles.

Buller Coupler Co. Hillsboro, Kansas

Buller Automatic Coupler

In Retrospect Columbus Held a Great Tractor Show

THE Sixth National Tractor Show was in progress at the time the February issue of The American Thresherman and Farm Power came from the press. One of the editors takes this as his first opportunity to pass on to our readers some outstanding impressions of the show.



J. B. Bartholomew, President of the Avery Company. Seems to Have Found the Secret of Perpetual Youth.

Any thresherman would have considered several days' viewing of the exhibits as time profitably spent. Aside from the power end of the game, the late separator models of the various big machinery companies were a revelation to anyone interested in threshing.

The big Coliseum at the fair grounds was used mainly by companies making both tractors and separators. One separator, finished in white and gold paint, caused every passerby to stop in wonder. Many threshermen, on viewing this machine, suddenly realized what a thing of beauty a good separator can be.

One separator was equipped entirely with rubber-fabric belting.



E. J. Gittens, Vice-President of the J. I. Case Threshing Machine Company, Was Formerly a Branch House Manager. He Knows Farm Needs.

There wasn't a tiny leather belt on the machine. To an old-timer, it brought home vividly the changes of the past few years.

Few drive belts were in evidence. The limited space hardly permitted much operating of separators, but several companies showed ingenuity in equipping their machines with short-length drive-belts, which enabled the separators to take power from dynamos.

Small tractors had no monopoly on the exhibits. Tractors with ratings as high as 40-70 were exhibited to the men who like lots of power. Silo-fillers and balers were shown, reminding the visitor of the multitude of belt-jobs available at the present time for tractor owners.

In spite of unseasonable weather and high rail rates, farmers poured in to the exhibits. Among the thousands of men crowding around the displays each day, probably forty per cent were farmers. Visitors were registered by university girls; on entering the grounds they were given identifying buttons. Dealers, farmers and exhibitors were presented with red, white and blue buttons, respectively. It made a good combination!



"Big in Every Way" Is the Best Description of F. P. Mount, President of the Advance-Rumely Company.

One outstanding impression was the feeling that, more than ever before, the manufacturers and their sales managers were fully appreciative of all that the farmers of today are up against. Very little direct sales talk was heard, but lots of service talk was going on. Both farmers and manufacturers are here to stay; the big idea now is to help the farmer at every turn—to give him real service. When that has been done, no one needs to worry about the farmer's remembering his real friend.

R. J. Blake, formerly a cartoonist with the Chicago Tribune, is now in charge of the Chicago office of the Clarke Publishing Company. Mr. Blake kindly consented to make a



A Real Ohio Product. R. T. Hodgkins, General Sales Manager of the Cleveland Tractor Company.

few drawings of some of the big men whom he happened to meet at the show, and we have had cuts made of the drawings.

Look at these pictures closely.



All the Way from California. H. H. King, with C. L. Best Tractor Company, San Leandro, California.

Regular guys, ain't they? And they are typical of hundreds of others.

A spirit of quiet optimism was found in the crowded Columbus hotels. Lots of men have watched prices shrinking this past winter, and it tended to make them blue; but the sentiment at Columbus seemed to be, "Gosh, it was a bad winter—but it's past. Spring is almost here. The grain is growing and it has to be cut. Let's go."



Paul Preston, Rock Island Plow Company, Favors the Bow Tie.

Why My Boys Stayed on the Farm

(Continued from page 6.)

On one big farm of high-priced land, such as ours, they were all right, but it was costing too much for me to keep on with this eighty-acres-per-boy arrangement. I saw I must do something to change my methods and still satisfy the boys.

The war gave me a breathing spell. Three boys were gone for a while, and the rest of us all pitched in and farmed the whole place.

When my boys came back from the army, they didn't show much restlessness. They were mighty glad to put their feet under Maw's table, once more, and we had to keep a hired girl to help Maw do the cooking.

I had my system all worked out. Charlie, who had been in the Motor Transport Corps, seemed a good man to be farm mechanic. I got him the latest farm shop equipment, told him to get what repair parts we needed for stock stuff, and to take charge of our farm lighting and pumping plants. He gets a regular salary for running my garage and machine shop.

Two years ago I bought a two-ton truck. I put Rudolph in charge of it. He is my hauling-expert, and when stuff is to be hauled, there is no argument about who is going to do it. He keeps this truck and my old light truck in good shape, for he has to pay Charlie for the repairs that he can't make for himself.

Bill is my tractor boss. His plowing work is a revelation to my neighbors. He specializes in it. For three years he has handled the tractor, except while in the army, but now he knows it is his one job, and he takes great pride in doing good, fast plowing. He is boss at silo filling time.

Last fall I bought a corn sheller. I had intended to hire a rig for the work, about eight thousand bushels. When I found I must pay four cents a bushel, I did some figuring. I could buy a good sheller for six hundred dollars. The repairs for the first year would not amount to much. Instead of paying my neighbor three hundred and twenty dollars to shell my corn, I paid six hundred dollars for my own machine, and put one of my younger boys in charge of it. In three years I will have saved enough, above operating expenses and wages to my own boy, to pay for it.

I have used this plan of putting each boy on some special farm power task for a year. Of course my boys all help at whatever job needs attention. As I said early in this article, they are good, dutiful boys; they would get along all right, most likely, if we went blundering along in the old way.

But I'm taking no chances. I'm

not such a moss-back but that I know that this "good-enough-for-me" line of talk is poor business—especially with boys. It isn't simply a matter of making money. The boys respect me because I keep up to the times. In this age of farm power, we lead the neighborhood in quality of equipment.

It means some trouble. I avoid most of that, for Fred, the only son who went to college, is my book-keeper. He pays the boys every Saturday.

As my youngsters get to the age where they will want special machine jobs of their own, I intend to have the tasks ready for them. I now own enough land that I can almost afford to do my own threshing. Instead of staying in a "ring," I'm going to start a custom business of my own. I may even get a steam engine for the belt work. The separator and the engine will furnish jobs for two boys—and I have the boys almost ready for the jobs. That is the reason why I'm so interested in reading *The American Thresherman* and *Farm Power*. I'm getting ready for the future.

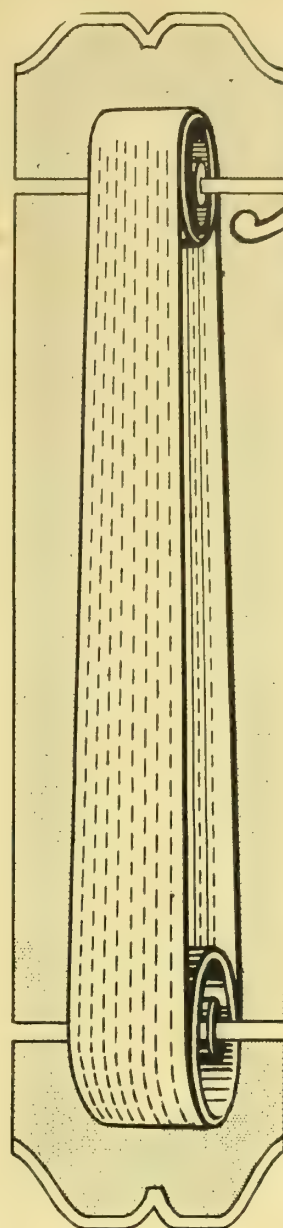
When we get into the threshing game, we will know what our threshing costs. Freddie will attend to that. He goes after costs as hard as Charlie goes after engine troubles.

I may even start old-age insurance, or something of the sort. Then, when Maw and I are at the pension age, we'll have it fixed so Fred can pay us every Saturday night, just as he pays the boys.

Possibly I have written about a lot of things that may not apply to the average farmer. For one thing, the average farmer has less than seven boys. The big principles that I have used, however, can be used by any farmer. Give the boy some interests that are his own. If manufacturers can afford to give their laborers shares in the factories, farmers can do the same for their sons.

Power machinery and big-scale methods furnished the solution of my problem. I don't have to keep my boys on our farm. They stay because they know that, if one of them left, I'd have to find another man to do his job. Suppose Bill thought of leaving, I'd say to him, "Bill, we might pull through now, but what would we do when the silo needs filling?" And that would hit Bill right where he thinks hardest. He knows we need him for his particular job.

Yes, sir, my boys stay because each one has his job. They stay because they like this system. And maybe they stay—a little bit, at least—because they like Maw and me.



Allied Belting'

Ready to Toe the Line

An up-to-the-minute Endless Thresher Belt must have Life—Flexibility—Dependability—Durability.

It must cling to the pulley like a bull dog; it must draw power from your machine like a mustard plaster; it must resist heat, water, acid and oil like a prohibition enforcement officer; and the price must be—well—the BOTTOM, that's all.

Very well, we are ready to toe the line and let you take our measure.

We make 'em all lengths, all widths, any ply, for every power machine. Allied Canvas Belts will cut your operating cost.

The Allied Belting Company
Greenville, Ohio



This hood uses the blast from the wind stacker to clean the dirt out of the straw. It builds better stacks by allowing the air current to pass through while the fingers drop the long, clean straw on the stack without blast. The straw falls in such a way that a perfect stack is the result. The fingers are made of properly shaped, oil tempered steel and are securely fastened, so the straw is easily dropped. Straw is worth more now than ever before, and it is up to the farmers to save it. Every thresherman who equips his machine to save straw is sure of more profits.

OIL-RIGHT LUBRICATORS

More arms and legs have been torn off and more men killed around the threshing outfit while oiling than in all other kinds of threshing accidents combined. The OIL-RIGHT absolutely prevents these accidents. This oiling system does not merely oil one or two bearings but it may be used to oil the entire machine. As many extra feeds may be used as desired.

We also furnish GRAIN SAVING STACKERS complete at a real saving to you. Write for particulars and price.

LINK MANUFACTURING CO. KANSAS CITY, MO.

BALCYLENE
THE WORLD'S
GREATEST
HARD OIL

Used by 5000 Threshermen 3000 Tractor Owners

The hard oil you have been looking for. Made from Pennsylvania steam cylinder oil, lard and tallow. One consistency only—medium hard. Color dark green. Takes the place of all kinds of hard oils and greases in all kinds of compression cups. Cools any troublesome bearing and keeps it cool. Unequalled for high speed or low speed work. How about that crank pin on the engine or the main bearings on the sheller?

In order to give every one a chance to test this wonderful hard oil we will mail a one pound box to any machine user for \$.25 post paid.

Write nearest office.

BALSO OIL COMPANY

Council Bluffs, Iowa

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Delivered to you Free

per \$2.00 trial on approval. Your choice of 44 styles, colors and sizes of famous Ranger bicycles. Factory-to-Rider price, sent by at wholesale prices, carriage prepaid, direct from maker.

12 Months to Pay

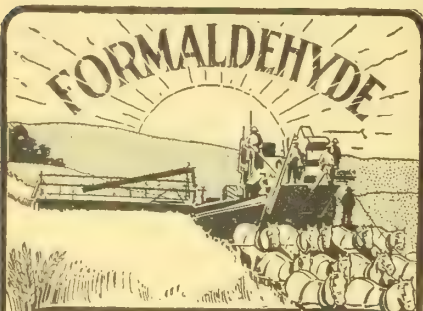
lets you enjoy your Ranger at once. Many boys and girls can't save the small monthly payments. The Ranger is a better bicycle than you can buy anywhere at any price.

lamps, horns, wheels, parts and equipment at half usual prices. Send No Money. Write for big illustrated Ranger catalog, with lowest prices and terms.

Mead Cycle Company Special Rider Agent
Dept. D-119 Chicago



Mention The American Thresherman and Farm Power

**Successful Crops**

Every farmer must do his part in securing the greatest yield from his farm. Big profitable crops will result if you take the advice of the U. S. Dep't of Agriculture and adopt the most up-to-date method of seed grain treatment.

FORMALDEHYDE
The Farmer's Friend

This powerful disinfectant destroys grain smut, rust and fungus growth. Prevents flax wilt, scab and black-leg diseases of potatoes and vegetables. Rids stables and chicken houses of disease germs and flies. Buy our Formaldehyde from your dealer. A pint bottle treats 40 bushels of seed. Big illustrated Hand Book FREE on request.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

Mention The American Thresherman and Farm Power



STILL the same dependable stitched canvas belt, the same good measure of wear, the same certainty of uniformity.

That's ATLAS. Time has not changed its good qualities.

You should know and try ATLAS. For until you do you're passing up the best buy in farm belts.

All sizes, for every purpose. If your dealer cannot supply you, we can. Orders will be given immediate attention.

Acme Belting Co.
Manufacturers
Niles Michigan

Mention The American Thresherman and Farm Power

Boys and Girls

Dick and Will

Our brother says that Will was born
The very day that Dickie came;
When one is four the other is,
And all their birthdays are the same.

Their coats and waists are just alike;
They have their hats together, too.
They sleep together in one bed,
And Will can put on Dickie's shoe.

But they are not the same at all;
Two different boys they have to be.
For Dick can play in mother's room
When Will is climbing in a tree.

Or maybe Will is on the porch
To cry because he stubbed his toe,
And Dick is laughing at the gate
And watching ants go in a row.

—The Atlantic Monthly.

The Black Ant and the Turkey

BY UNCLE TROY

"O wad some Power the giftie gie us
To see ourselves as ithers see us!"

A fine old bronzed turkey, becoming disgusted with the monotony of the food which the farmer dished out to her every morning, noon and night, finally determined to quit the barnyard and seek choice morsels of food for herself in the open country which she could see beyond the high lot fence. Having made up her mind she flew over and coaxed her downy little children through the cracks, and thus into the open pasture which extended away to the foothills in the distance. She was followed gleefully by her "whistling" little brood as she picked her way carefully through the tall blue grass and golden-rod. Each collected food along the way and was pleased with its variety.

"Draw near, my darlings," called the mother, on beholding a busy ant hill where the blue grass made way for a prim little mound of earth, "this hill before us shall furnish a day's supply of the choicest food. Behold the busy little ants! There must be millions of them in that secluded place. Fear not their sting. Do as I do; eat thy fill. Oh, how happy would we be in the midst of this gracious bounty if we could but feel secure against the executioner's axe!"

"Listen, my children," she continued, "give ear unto my wisdom. Fear man all the days of thy life, for he preys upon innocent turkeys who are defenseless against his onslaughts. Each Christmas the executioner's block resounds with the deadly thud which, with unerring swiftness, severs head from quivering body. Man gloats over our roasted flesh and makes merry around the flowing bowl. Never is he so poor but that on a Thanksgiving dinner his table is graced with some slaughtered noble bird of our race. Truly, man is the most self-seeking glutton on earth."

Now a wise old ant had climbed high into the branches of an overhanging broomweed quite beyond the reach of the mother turkey and,

feeling secure against all danger, called down a rebuke upon her in these indignant words:

"Hold, thou gluttonous wretch! Ere you remark another sin of man, please be good enough to look within thy own conscience. Control your narrow-minded appetite, else you and your hungry brood our whole race destroy in one selfish meal!"

From Our Boys and Girls

DEAR AUNT JANE:

This is my first letter to you. I am a girl thirteen years old. I live on a farm of seventy-five acres. My brother Walter takes The American Thresherman and Farm Power. I enjoy reading the Children's Page very much. My father owns a J. I. Case threshing outfit. We also have a big six-cylinder Studebaker auto. I like to ride in it. We have



In the Sunny South.

These little cousins are playing on a porch in the sunny south, at Loving, Texas. They are very fond of each other and the picture-man caught them, just as they were having a good, "bear-hug." The one with the cap on is Claud Oliver, Jr., and the other is Frederick McBrayer, Jr.

three horses, sixteen head of cattle, and three pet cats. I can knit, crochet, tat and embroider. I also work comfort blocks.

FLORENCE APPLE.

Covington, Ohio

(I am glad you are learning to do so many things with your hands, Florence.—AUNT JANE.)

DEAR AUNT JANE:

While I am only ten years old, I have almost a hundred dollars in the bank. I made this money by getting more eggs from our Plymouth Rocks. Last summer, with my father, I visited the poultry houses at our state agricultural college, and the man in charge there told me farmers would get more eggs if a wet mash, potato peelings and old cabbages were fed in winter.

I wanted father to feed our hens like the poultry man told us, but he said that mother and he were too busy to fool with chickens. So all winter I have been doing the work and getting the money for eggs; but I have to pay for all the feed except the wheat, oats and cracked corn. With my egg money I have saved almost one hundred dollars.

This spring I am going to buy some good White Leghorn eggs. I believe a little boy can make more money with White Leghorns, and I want purebred chickens. Our old tool-house is not a good place for hens, and if I make enough money this year I will build a new house for my hens, just as the poultry man said we ought to do.

Your nephew,

JOHN DIXON.

Manhattan, Kans.

(Fine, John, I wish you would write and tell me these things: what you feed your hens, in what winter month you get the most eggs, and why you think Leghorns are better than Plymouth Rocks. Any other reader must feel free to write me about these matters, too.)

One hundred dollars is a lot of money for a boy of ten years. Has any other "ten year old" saved this much? If so, how did you make it? Let me hear real soon—AUNT JANE.)

DEAR AUNT JANE:

This is my first letter to you. I am a little girl eight years old. I am in the third grade. I am the youngest of five children. I have three sisters and one brother. My sisters' names are Versie, Zehak and Anna. My brother's name is Stanley. My brother and I have two large white rabbits named Zinks and Betty and six little white rabbits, a hen and a kitten, for pets. My father takes The American Thresherman and Farm Power. I love to read the Children's page.

Your friend,

LOIS WRIGHT.

Eaton, Ohio.

(How are the rabbits, this winter, Lois?—AUNT JANE.)

DEAR AUNT JANE:

I am a boy twelve years old. We farm a half section of land and live half a mile from the river. My three brothers and I earned \$29.26 by trapping one year. We have a mile and a half to walk to school. I am in the sixth grade.

Your nephew,

IVAN HOGEN.

(Tell us about your trapping, Ivan. What kind of animals did you trap and what kind of traps did you use?—AUNT JANE.)

DEAR AUNT JANE:

I am a little boy who lives in the city of Bellaire, Ohio, on the Ohio river, in the eastern part of the state. I go to school just a block away from our house. There are many factories and steel and iron mills in sight. The Ohio river is only a short distance away, also the Pennsylvania railway. The Baltimore & Ohio railway crosses town a mile down the river on an elevated track and over the river to Washington, D. C., and west to Chicago. The street car line

so passes us, to Wheeling, West Virginia; Steuberville, Ohio, and many more towns. My dad sells Advance-Rumely engines and threshers, also the famous OilPull tractor. I have an uncle in the country who has a Frick steam engine, a Birdsell over huller, an Ohio hay press, and a hydraulic cider press. He has old threshing machinery also. They have a Chevrolet auto out at the farm and I ride in it when I go out there. I also see The American Thresherman and Farm Power and want to take it when I am older.

Your nephew,
Bellaire, O. DENT FORMAN.
(Would you rather live in the city than in the country, Dent?—AUNT ANNE.)

DEAR AUNT JANE:

I am a little girl eleven years old. We live on a farm of three hundred and twenty acres in Phillips county. We are fifty miles from the Little Rocky Mountains, which we can see very plainly. We can also see the Bear Paw mountains, which are seventy miles away. Some time we intend to drive with our car to the Bear Paw mountains for a vacation and pick blueberries while there. I like Western life. It's fun to see the cowboys ride the wild horses.

Your niece,
Wagner, Mont.
ETHEL PETERSON.
(We would like to hear all about our trip to the mountains, Ethel.—AUNT JANE.)

DEAR AUNT JANE:

I have been a reader of the Children's Page in The American Thresherman and Farm Power for a long time but have never written before.

I am nine years old and am in the fourth grade at school. I have a little brother four years old and as his birthday is on the Fourth of July we have a double celebration every year. His name is Philip but we call him Billy.

Last year I got a book by the name of Uncle Tom's Cabin for Christmas. It is a very interesting book. It is about a negro slave who is treated very mean and is sold from one slave owner to another. Uncle Tom is very kind. One day his master told him to whip his own wife but he told his master that he would rather be whipped himself, and this made the master so angry that he began to whip Uncle Tom. Soon after that Uncle Tom died and everyone was sorry, for he was so good. I wonder if any of the other cousins have read this book, too. Your niece,

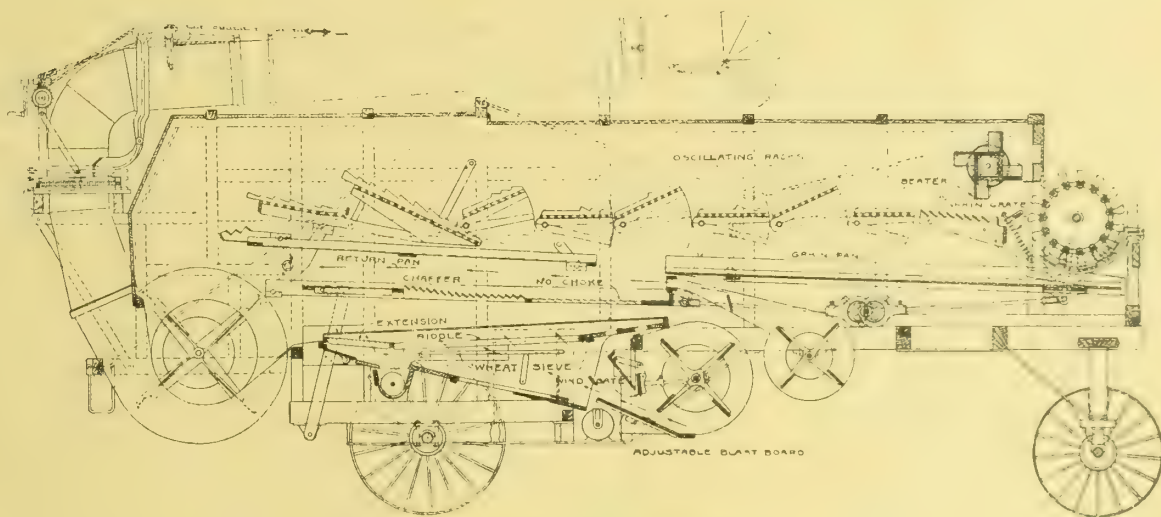
Bingham Lake, Minn.
(We are glad you enjoyed reading Uncle Tom's Cabin, Minnie. What other books have you read?—AUNT ANNE.)

The Baker Separator and the Baker Uniflow Engine

CONSIDER the Baker Separator, how it works, it "toddles" not, neither does it "shimmy." Here is an exceptionally well balanced, quiet running and quiet standing machine. It is thoroughly adjustable. Every bearing or joint that will show wear for many years to come is made adjustable so that it can be kept running smoothly, free from knocks and pounds.

Consider, too, those oscillating racks which give the straw so much agitation and so effectually shake out the grain.

Consider also the two fans. The chaffer fan does so much of the work that a perfect job of cleaning can be done by the main mill without any fear of blowing over light grain or having large amount of elevation.



The Baker Separator

You can not afford to not at least make inquiry about the Baker Separator if you are thinking of buying, and the same holds good as to the powerful, economical, sturdy yet light Baker Uniflow Engine.

**The A. D. Baker
Company**
Swanton Ohio

March
1921

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Your Spare Time is Your Own

MAKE good use of it. Don't lounge around in idleness. Those lazy hours between the evening meal and bedtime can be made productive to you if used right.

Learn to look upon your spare time as money. For it is that. And then invest it in work that will bring you the most attractive returns.

The man who prepares himself for a better job is making the right use of his time. And his investment is bound to pay big dividends.

Enroll for work in the Clarke School of Traction Engineering. Through our method of instruction we teach you how to successfully operate a gas tractor, how to care for it and how to detect trouble and make your own repairs.

The work comes by mail and all studying can be very easily done during evening hours, and does not interfere with present employment.

The knowledge and training acquired from this course will soon lift you from the rest and put you in line for a better job with higher pay.

Write and tell us that you're interested.

Clarke School of Traction Engineering
Madison, Wisconsin

Special Deferred Payment Offer

TO meet the present conditions in the farm market—the apparent scarcity of money, we offer a plan of deferred payment which makes it possible for anyone to take up the work now.

The regular price of our Gas Tractor Course is \$30. Our plan is this: Pay us \$5 down to indicate that you mean business, then pay the \$25 balance on or before August 1, 1921.

This means that if you work and study diligently you will have mastered the course before the final payment is due.

Take advantage of this special offer. **It will positively be withdrawn after May 1st.**

For Higher Yields of Grain

(Continued from page 10.)

As a rule, there are two big things needed on these soils which have been cropped for a long time—more humus and available plant food. Generally the deficient supply of humus—which is decaying vegetable matter—has tended to allow the soil to get in poor physical condition. It is hard and runs together easily, and is more difficult to work than in former years. The humus has been mined out in the crops of the past, and sold as grain into the markets of the world, and perhaps even the straw was not returned. In other words, the land has not been given a fair chance.

All this can be changed if a good crop rotation is started which is adapted to the conditions under which one is working. The exact method will, of course, depend on the local conditions—one can as a rule get some good information along this line from the more successful farmers in his section. There are, however, a few fundamentals which can be kept in mind in all sections. Perhaps the most valuable of these is the importance of providing a big place for the legumes—the most important soil improving crops in American agriculture. A legume, such as alfalfa, clover or cowpeas, will add humus to the soil and that most expensive of all fertility elements—nitrogen. It takes the free nitrogen from the air and stores it on the little nodules on the roots—no other class of plants except the legumes can do this. The grain plants, such as wheat, corn and kafirs, are nitrogen exhausters—they leave the soil poorer in nitrogen after they are grown, while as a rule the legumes will leave it much richer in this element, even after taking care of their own requirements.

Under ordinary conditions, in addition to the legume, it is best to have an intertilled crop, such as corn or potatoes; a crop for which the soil is prepared in the summer, such as wheat; and it usually is helpful in the change from corn to wheat if one grows a spring sown crop like oats or barley. Just the way these crops are combined to make up a rotation will always be an individual problem.

If one works out a rotation of this kind he doubtless will find that he is producing a considerable amount of coarse feed which can be used in the most efficient way only if it is fed to livestock. While it is true that the livestock farmers of the country have not been exactly in a bed of roses during the past two years, it also is true that some of the best money in American farming has been produced from livestock; and notwithstanding the discouraging markets we have faced since last summer, this will be true in the coming years. A system

of livestock farming is, as a rule, a substantial type of agriculture.

Naturally the conservation of the manure is connected closely with the problems of livestock farming. Barnyard manure is the cheapest and best fertilizer which we have in the country, and every pound of it should always be saved and returned to the soil. Commercial fertilizers are valuable and they will have an increasing use on the grain fields of this country, but they should be applied only after the best use has been made of the manure produced on the farm.

Every scrap of vegetable matter such as straw and corn stalks, also needs to be conserved and returned to the soil. The burning of straw and stalks has been one of the great crimes against the soils of America, and the unborn generations that will be handling the farms of this nation long after the present farmers have been laid to rest. At present prices for commercial fertilizers a ton of wheat straw is worth four dollars or more, and it can be spread, with the efficient machinery available, for a very small proportion of that price. A man can make abnormally high wages in spreading straw, which is exactly what should be done with all which is not required by the other farm needs or the commercial market, which is taking an increasing amount. The commercial buyers, by the way, should be forced, by a shortage of supplies, to bid up somewhat higher than they usually have been doing.

If a man establishes a good rotation, with a big place for the legumes, conserves the supply of manure, straw and stalks, feeds the rough feeds to the cattle and then does a good job of farming, he is placing himself in a position so he can get some good yields. As a rule, he will find that he is raising as much grain on a much smaller number of acres, and that in addition to having a smaller net bushel production cost he also is ahead a great deal on the feed from the other crops he is raising which he didn't produce in his days of one-crop grain farming.

Most threshermen know this is true from personal experience with their patrons. They can do much in increasing the interest in soil conservation and in the whole movement to get larger yields if they will talk about the high yielding field which they thresh as they go over the country, and carry the news concerning the seedbed preparation and the soil management methods which were used. All these increased yields will react to the benefit of the thresherman who spreads the gospel of "more bushels per acre."

For Sale and Want Department

If your engine is too small or somewhat worn, if you have a thresher, feeder, stacker, shredder, sheller, cream separator, baler, wood saw, farm land, or anything else that you would like to get rid of—

Let us help you sell it

A "For Sale" ad in these columns will put you in instant touch with thousands of men, among whom there is sure to be a goodly number who are anxious to buy just what you have to sell. You can also find just what you want if you will advertise your wants in these columns.

Fix up a little ad for the next issue and start things moving right away. Quick sales come from our "For Sale and Want Ads" and the cost is only trifling when you consider the service.

Twelve cents a word each month. Remittance to accompany order. Copy for this department must be in our hands by the first of the month.

POSITIONS WANTED

POSITION WANTED—By bookkeeper. Chas. Wagner, Subiaco, Ark.

WANTED—Position as engineer, road or field; five years' experience with steam and gas. Reece Keller, Georgetown, Ind.

POSITION WANTED—By experienced man, operating gas or kerosene tractor or a road grader. K. W. James, Prescott, Ia.

POSITION WANTED—After July 1, driving a tractor anywhere, by expert mechanic with thorough knowledge of motors. Fifteen years' experience. State conditions. G. Mezzatesta, 101 West 58th St., New York City.

HELP WANTED

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

SELL OIL, GREASE, PAINT, SPECIALTIES for immediate and summer delivery. All or part time. Commission basis. Should have car or rig. Samples free. Write for the attractive terms. Riverside Refining Co., Cleveland, Ohio.

WORK WANTED—Expert boiler welding. Don't scrap that engine. Cracks, bulges, patches, staybolts; work guaranteed. Will call anywhere. Make dates now. Wire or write. A. A. Koch, Albert Lea, Minn.

AGENTS in every state to sell "The Gospel of Free Masonry," by Uncle Silas. Price \$1 a copy. Guaranteed to give entire satisfaction or money refunded. Proceeds devoted to charity. Address, B. B. Clarke, care Clarke Publishing Co., Madison, Wisconsin.

SALESMEN WANTED—To sell well-known line of oils, paints and roofing materials direct to farmers. Men average from \$100 to \$200 per week. Commissions paid weekly. Bonuses paid monthly. Wengerd of Ohio made \$430 in one week. Callahan of Pennsylvania made \$300 first six months. Meyers of Minnesota took 102 orders first month. Fine opportunity for live-wire salesmen. Steady demand at all times. Shipping points—Cleveland, Chicago, Kansas City, Minneapolis. For complete proposition write—Central Petroleum Co., Cleveland, Ohio.

FOR SALE

FOR SALE—John Deere engine gang. Wm. Mandler, Medina, N. Dak.

FOR SALE—Fairbanks-Morse 12-H. P. portable, used very little; big snap. Box 78, Knapp, Wis.

FOR SALE—One 28-H. P. and 36x56 nearly new Minneapolis threshing rig. Price complete, \$2400. F. J. Crique, R. 4, Plankinton, S. Dak.

FOR SALE—20-H. P. Case rig complete; 20-H. P. Huber engine; 36x60 Port Huron separator; 32x54 Huber separator. Jas. Klase, Fairbury, Nebr.

FOR SALE—Seed potatoes, formaldehyde treated; improved farms; engines, tractors, typewriter, automobile trailer. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—New Waterloo Boy tractor. A bargain for cash. Box 596, Prairie City, Ia.

FOR SALE—30-60 OilPull tractor, used one season. E. J. Host, Lake Geneva, Wis.

FOR SALE—Extension rims, 60"x8" face. B. Hansen, Box 104, Lake Norden, S. Dak.

FOR SALE CHEAP—30-60 Rumely OilPull tractor, nearly new. W. J. Priebe, Waseca, Minn.

FOR SALE—16-H. P. Gaar-Scott engine. Price \$350. One tender, \$30. Carsten Holdorf, Walcott, Ia.

FOR SALE—Emerson-Brantingham 12-20 tractor, used one season, first-class shape. J. J. Klag, Tonica, Ill.

FOR SALE—Two 32x52 separators. Wood Brothers engine. Otto Tiemann, Hornsby, Ill.

FOR SALE—Ferguson well drill, new, and stock of pumps and windmills, etc. W. H. Schanfeld, Alta Vista, Ia.

FOR SALE—Reeves 13 compound. Also Hartley extension conveyor weigher. C. E. Fox, R. 8, Seymour, Ind.

FOR SALE—25-H. P. Huber steam engine, \$600. J. E. McLaughlin, Dunseith, N. D.

FOR SALE—14-28 Avery tractor, 1920 model, used only a short time. E. J. Pishny, Cleburne, Kans.

FOR SALE—25 Reeves engine; 36x62 Minneapolis separator. Albert Watts, Beaver Crossing, Nebr.

FOR SALE—Will sell my 8-16 Happy Farmer tractor, in first-class order, for \$265. Frank T. Grogan, Sussex, Wis.

FOR SALE—One 10-20 Bull tractor, run very little and in good shape. Price \$275. John P. Stier, Sussex, Wis.

FOR SALE—One 28x50 Case steel separator; in fine shape, belts good. Geo. F. Jeffrey, Kingston, Mich.

FOR SALE OR TRADE—16-H. P. Advance, almost new. Wm. Vandre, Mendota, Ill.

FOR SALE—One new bull gear, No. 702 P. for Advance engine. H. J. Plambeck, Carpenter, Wyo.

FOR SALE—One Gaar-Scott clover huller with feeder and blower; in good shape. Price \$500. Oscar Berg, Menomonie, Wis.

FOR SALE—18-Huber and 36x56 Red River. Complete. \$1500. E. A. Henry, Camargo, Ill.

FOR SALE—12-25 Huber tractor, like new. Would trade for Ford touring or truck. Earl Groves, Bethesda, Ohio.

FOR SALE—One 36x60 Huber separator. Complete, good as new. Will sell cheap. Edw. Hassler, R. 21, Peru, Ill.

FOR SALE—Nash four-wheel drive two-ton truck, good as new. A bargain. J. E. Casebeer, R. I, Poland, Ind.

FOR TRADE—80 acres land in southwest Missouri, for 25-H. P. steam engine in good condition. H. C. Devore, Natoma, Kans.

FOR QUICK SALE—12-24 Waterloo tractor, 1917 model, used little, \$275. Will Hey, Baldwin, Kans.

FOR SALE—Avery five-bottom power lift plow, slightly used, at sacrifice. Henry Rosenow, Oconomowoc, Wis.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

FOR SALE—Garden City feeder and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE OR TRADE—One Huber tractor, large motor, like new. What have you? D. K. Roth, Gibson City, Ill.

FOR SALE—16-H. P. Rumely steam engine, 34x56 separator fully equipped. Riefe & Kuehl, Dixon, Iowa.

FOR SALE—Mogul 8-16 tractor and 2-12 inch plow. Price \$400. Ernest H. Smith, R. 1, Celina, O.

FOR SALE—Case 60 steam, 36x58 separator, water tank. Complete. A bargain. Box 78, Knapp, Wis.

FOR SALE—14-H. P. Advance steam engine, in fine shape. E. M. Brubaker, Prairie City, Ia.

FOR SALE—Four-bottom self lift P & O plow, \$75; 32-inch Ruth feeder, \$80. Both like new. Mrs. Laura Tobias, Malinta, Ohio.

FOR SALE—22-H. P. Pitts engine; 32x54 Avery separator, shack, Heineke feeder. Bargain. Edd Werneke, Renfrow, Okla.

FOR SALE—20-H. P. Port Huron engine; Russell separator, 33x54; No. 1 Birdsell huller, tank, belts, canvas. D. B. Kirkley, Lakeville, Ind.

FOR SALE—One 32x54 Aultman-Taylor separator, complete, good condition. Or will trade for 26-inch or 28-inch machine. Beer Bros., Golden, Ill.

FOR SALE—20 H. P. Nichols & Shepard double steam engine; 32x54 Case steel separator, complete, A-1 condition. Fitzgerald, Oberlin, Kans.

FOR SALE—Morris Improved beading tool, two-inch flue. First \$20 check gets it. New, used once. Edward Schneider, R. 4, Ann Arbor, Mich.

FOR SALE—22-H. P. Advance engine and Minneapolis separator, nearly new. Price right. Write for April secondhand list. L. D. Thorp, Aurora, Ill.

FOR SALE—25-H. P. Russell engine; Case 36x58 separator. All complete and in good condition. Fred Lipprant, Pontiac, Ill.

FOR SALE—20-40 Case; 16-30 OilPull; 12-25 Waterloo, at bargain prices. Write for full particulars. Roy Wells, Isabella, Okla.

FOR SALE—Gaar-Scott rig. 16-H. P. steam engine and 32x54 separator and equipment. Priced to sell. W. J. Knoke, Knoke, Ia.

FOR SALE OR TRADE—36-inch Case separator, run two seasons. Also 60-horse Hart-Parr. W. Ensminger, La Harpe, Kans.

FOR SALE—24-inch Geiser separator, used ten days, \$800. Will take good Ford car or truck on same. Roy Wood, Ogallala, Nebr.

FOR SALE OR TRADE—Hardware and implements for machine shop equipment. Describe yours fully in first letter. W. E. Toler, Pawnee, Okla.

FOR SALE—32-inch Minneapolis feeder, almost new. Your own price. No. 17 Ohio silo cutter, \$75. Birdsell No. 1 huller. H. C. Higgins, Warrensburg, Mo.

FOR SALE—Rumely 20-horse double cylinder engine; 10-20 Titan tractor plows and disc. Bargain. Clarence Kelley, Mishawaka, Ind.

FOR SALE—One 75-H. P. Reeves engine, Minneapolis 36x62 separator, one 40x62 Case, Moline Model D tractor. Gardner grain weigher. G. A. Wigdahl, Rothsay, Minn.

FOR SALE—Large Case threshing outfit, located Colorado. Also Rumely 12-25 tractor, located Robins. Walter Briney, Robins, Ia.

FOR SALE—Several hundred bushels of scarifying Yellow sweet clover. Free from foul seed, at \$12.50 per bushel. Fred Eisele, R. 2, B, 61, Onawa, Ia.

FOR SALE—Reeves 40-65 gas tractor in A-1 shape, \$1800. One six-disc La Crosse plow, used but little, \$200. B. A. Daniel, Croft, Kans.

FOR SALE—Three No. 514 rebuilt Bemiller sawdust blowers, complete, \$55 each. Bemiller Foundry & Machine Co., Belleville, O.

FOR SALE—High tension tractor, auto and truck magnetos. Guaranteed. \$20 each while they last. D. W. Newhouse, Kingston, O.

FOR SALE—Six P & O breaker bottoms, twelve breaker shares, six stubble. First check of \$65. Also Hart-Parr 30-60 parts. John Sykora, Windom, Minn.

FOR SALE—36x60 New Frick separator, used about forty days; in fine shape, fully equipped. Price and terms right. Diets Machinery House, Bloomington, Ill.

FOR SALE OR TRADE—One 10-20 Titan and plows, used twenty-five days. Also 15-30 International, used three years; rebuilt and in good shape. W. R. Walker, Sullivan, Ill.

FOR SALE—Eighty acres of rich swamp land in Taylor County, Wisconsin; every acre can be drained. Will trade for good farm machinery. D. W. Newhouse, Kingston, Ohio.

FOR SALE—Hart bucket elevator with cross conveyor, \$50; Barnes pump and hose, \$12. Universal straw racks, 64-inch, for Aultman-Taylor, \$20. Wm. Roetter, Linn, Kans.

FOR SALE—One Minneapolis 25-50 tractor and John Deere engine gang, six-bottom with stubble and breaker bottoms. Price \$1500. Jurgen Petersen, R. 3, Box 78, Fertile, Minn.

FOR SALE—Case 15-27 oil tractor and Oliver three-bottom plow at half the present price. Practically new and guaranteed. Irving Schoepel, Fort Gage Ill.

FOR SALE—16-H. P. Rumely steam engine and Case 32x54 separator with 14-foot Garden City feeder, used five years; in first-class condition. Geo. Rennie, Knoke, Iowa.

FOR SALE—Nichols & Shepard separator, overhauled, repainted, guaranteed, at Peoria, Illinois, 36x56, retoothed right. All in first-class shape. Half price of a new machine. Geo. Roberts, Wyoming, Ill.

FOR SALE—20-H. P. Cushman gas engine on trucks, in first-class condition. Also new three-bottom Moline power lift plow, never been assembled, at a bargain. W. J. Knoke, Knoke, Ia.

FOR SALE—New Ottawa D sheller and 22x36 International thresher; used 12-25 Waterloo Boy; 8-16 Mogul and 15-25 Lauson tractors. Ventler & Klingebiel, Ashton, Ill.

FOR SALE—25-H. P. Chandler-Taylor skid engine, with new Sinker Davis boiler, fire box pattern; 31x49 separator, twenty new boiler flues, 2 1/4 x 3/4. Box 18, Laurel, Ind.

FOR SALE—Minneapolis 32x56 separator with belts and all attachments. Threshed about fifteen thousand bushels. Kept well covered and under shed. A bargain if sold soon. S. H. De Pue, Dundas, Ohio.

FOR SALE—18-H. P. D. C. Buffalo Pitts engine; 32x54 Wood Bros. separator; eight-roll Advance husker; No. 1 Birdsell huller; tank, wagon, etc. Write for particulars. Ralph Odell, Coldwater, Mich.

FOR SALE—Port Huron 20-H. P., Advance 20-H. P.; Advance 36x56; Red River Special 36x56. Complete working parts, new. Tanks, drive belts, pumps, hose. Must sell. Chas O'Neill, Manteno, Ill.

FOR SALE—P & O four-bottom tractor plow; can be made into a three-bottom. Plowed only twenty acres. This plow is like new. First draft for \$175 takes plow. Newmann Bros., Gilman, Ill.

FOR SALE—Rebuilt Parrett, Wallis Cub, Heider, Fordson. These tractors are bargains at the price. Write Indiana Triangle Motors Co., 155 Kentucky Ave., Indianapolis, Ind.

FOR SALE—Emerson 12-20 tractor, three-bottom plow, ten-foot tandem disc. Also medium sized threshing outfit. A-1 condition. John Anderson, R. 2, Box 39, Batavia, Ill.

FOR SALE—Two Rumely 20-horse traction engines; Rumely 36x60 separator; Huber 36x60 separator. Both complete with attachments. Price right. E. R. Metz, Wellington, Kans.

FOR SALE—Holt Caterpillar 45-60, bought in 1914 and has plowed less than twenty-five hundred acres. In good condition. J. F. Stambaugh, McGuffey, Ohio.

FOR SALE—One 16-H. P. Gaar-Scott engine; 26x46 Case separator, feeder, wind stacker and weigher. Run two years. twelve-barrel tank, mounted. R. C. Mellin & Son, R. 7, Kent, Ohio.

FOR SALE—Breaking plows for brush and marsh lands from two 20-inch to four 24-inch gangs. Also five-bottom Avery self lift, \$300. E. R. Vehrs, Ne-koosa, Wis.

FOR SALE—One 2½ A Western sheller, like new, complete with three sections, 40-foot drag. Always been in good shed. Price \$425. Andrew Meisner, Raymond, Ill.

FOR SALE—One Illinois 3-4 plow tractor and Oliver three-bottom self lift plow, in good condition, \$1650. One Oliver tandem disc, was never set up, \$160. Dewey Elliott, R. 2, Oxford, Iowa.

FOR SALE—30-60 Hart-Parr tractor; 32x54 Nichols & Shepard Red River Special separator; one eight-bottom P & O engine gang. August Carlson, Webster, S. Dak.

FOR SALE—20-H. P. heavy duty Frick engine. New Aultman & Taylor 36x56 separator, complete. Run one season. Guaranteed A-1 condition. Ill health the reason for selling. R. L. Bottoff, Goshen, Ky.

FOR SALE RIGHT—22-H. P. Geiser, 20-H. P. Huber, 36x58 Case separator, complete. Two steel tanks, sleeping car, two six-bottom plows, one man control for 15-27 Case. Write Raymond Alexander, Hutchison, Minn.

FOR SALE—One Ottawa C sheller, complete with three sections of new belt drag, in A-1 condition. Price \$350. One Twin City 25-40 tractor, in A-1 condition. Price \$1150. W. H. Hoeg, Lincoln, Ia.

FOR SALE—Minneapolis threshing rig. 20-H. P. direct flue steam engine, 40x62 separator with wing carriers, feeder, weigher and wind stacker. All in A-1 shape. Separator new last fall. Erik O. Stora, R. 1, Decorah, Ia.

FOR SALE—18-H. P. Gaar-Scott engine; 33x56 Gaar-Scott separator with new Garden City feeder, wind stacker and weigher, twelve-barrel tank. Company dissolving. Chester Watson, Wolcott, Ind.

FOR SALE OR TRADE—52 steam engines and tractors. Different makes, from 12 to 35-horse power. Largest stock of engines, separators and supplies in the Northwest. Write for sizes and prices. Baldwin & Green, Sioux Falls, S. Dak.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—One 20-40 Rumely OilPull tractor; one 32x52 Advance Rumely separator; Garden City feeder; one oil tank and truck; two P & O triple gangs, plow hitch and engine guide. All new and complete. Address H. G. Young, Doniphan, Nebr.

FOR SALE—Steam engines. Reeves, Advance, Russell, Case, Huber, Star, Rumely, Jumbo, Gaar. All standard makes of separators. Write for list and prices. Marth Thresher and Supply Co., 422 North Main St., St. Louis, Mo.

FOR SALE—One 20-H. P. Rumely engine; one 20-H. P. Gaar-Scott; one 16-H. P. Stevens; one 25-H. P. Reeves. Separators—one 33x56 Gaar-Scott; one 32x56 Advance; one 32x54 Avery. All in good shape. Roy Vail, Clarksburg, Ind.

FOR SALE OR TRADE—One 10-20 Titan; 25-H. P. International tractor; 10-20 Case, 32" New Racine thresher, feeder and blower; 1,000-pound International truck; eight-roll McCormick shredder. W. S. Griffin, Letts, Iowa.

FOR SALE—One Case engine, 20x60, complete with coal bunkers and one twelve-barrel tank and hose. One Case separator, 32x54, complete with feeder and wind stacker, weigher and clover attachments. Cheap if sold soon. E. E. Spangher, Meeker, Ohio.

FOR SALE—Two Improved Carpenter Heineke wing feeders, 36, run forty-five and sixty days. One Universal No. S-36 feeder, run thirty-five days. One set Carpenter wings, latest make, run fifteen days. C. Anderson, 3244 Oakland Ave. S., Minneapolis, Minn.

FOR SALE AT A BARGAIN—Two Case threshing outfits. 20-horse engine; 40x62 steel separator; 25-horse engine, 40x62 steel separator, Garden City feeders, Case weighers. Reason for selling, too much to look after. H. Sprague, Box 71, Terre Haute, Ind.

FOR SALE—Port Huron 19-horse steam traction engine; 36x60 Port Huron separator, complete; Port Huron large sheller; No. 6 Birdsell clover huller; six-roll Advance shredder, all ready for work. Reason for selling, ill health. W. F. Paul, Pawnee, Ill.

FOR SALE—New drive belts and belting at less than half price; new Frick machinery and all kinds secondhand machinery. Special this month. 6¼x11 Rumely double cylinder steam traction engine, \$600. C. N. Kisecker, 131 Wroe Ave., Dayton, Ohio.

FOR SALE OR TRADE—16-H. P. Reeves simple engine No. 5212; Baker separator, 33x56, six years old, and drive belt. Whole rig for \$500. Also Gould valve for 18-H. P. Frick, \$10. Want 40-60 OilPull or Aultman Taylor. Wm. Vandre, Mendota, Ill.

FOR SALE—32x56 Minneapolis separator with Garden City feeder, wind stacker and short bagger, \$600. Complete rig, 20-H. P. Russell engine, 32x54 Russell separator, \$2800. Also secondhand farm machinery. Write what you need. Oscar A. Hitt, Alma, Wis.

FOR SALE—One 40-80 Avery tractor; one 36x60 Rumely separator; one 36x60 Cape separator; one 15-30 International tractor; one 18-36 Aultman Taylor tractor; one 36x60 Nichols & Shepard separator; one 12-25 Waterloo Boy tractor. For particulars write A. C. Kelso, 206 E. Kent St., Streator, Ill.

FOR SALE—Three 20-H. P. single Keck-Gonnerman engines; one 18 H. P. double Keck-Gonnerman engine; one 22-H. P. undermounted Avery, with contractors tanks; four 36x56 Keck-Gonnerman separators with feeders, weighers and blowers. All above machinery in good shape, practically new. Address E. C. Lovellette, Mt. Carmel, Ill.

FOR SALE—400 acre farm, sixty acres under cultivation, sixty acres ready to pull stumps, fourteen room house, bank barn, 36x60, sawmill, another frame house, 18x27, log stable. Two good wells, two springs and running water. Ten miles from county seat. Price \$65 an acre. \$10,000 to \$15,000 cash, balance ten years. B. B. Clarke, Madison, Wis.

FOR SALE—New 12-20 Rumely OilPull; 16-30 OilPull, nearly new; 30-60 OilPull; 30-60 Aultman-Taylor; 40-65 Twin City; Aultman-Taylor 36x60 separator; 36x60 Avery separator. All in good condition. New 2-3-4-5 bottom engine plows. New Idea Nisco spreaders, trailers, lighting plant. All at prices to sell. Wanted—good motor cultivator. H. P. Hansen, Torino, Ill.

FOR SALE—20-35 Emerson-Brantingham tractor, in running order but needs some repair. First check for \$350 takes it. 22-44 Nichols & Shepard tractor, rebuilt, \$1200. Also Oliver four-bottom power lift plow, in excellent condition, \$150. Sold together or separately. Box 155, Powell, Wyo.

FOR SALE OR TRADE—One 15-H. P. Case engine; one 10-20 Mogul tractor; one 12-H. P. I. H. C. portable gasoline engine; one 28-inch Nichols & Shepard separator, complete; one 24-inch Geiser separator, complete; one three-bottom Oliver tractor plow. Colby & Spitzer Co., Hart, Mich.

FOR SALE—One 16-H. P. Robinson traction engine; one 20-H. P. Case traction engine; one Case separator, complete; one 36x60 Advance separator, complete; one 20-H. P. Minneapolis engine and a 36x60 Minneapolis separator, at bargain price. J. A. Cooper, 234-236 W. Maryland St., Indianapolis, Ind.

FOR SALE—One J. I. Case 36x58 steel separator, complete with all belts, ready to run. Price \$500. One Maytag eight-roll shredder, ready to run. Price \$200. If taken by June 1, 1921, these bargains are worth looking after. Come and see for yourself. A. E. McCallister, Maquoketa, Ia.

FOR SALE—25-horse Russell steam engine; 34x56 Rumely separator, run eight seasons, good belts, two drive belts. New Russell water tank, B Type International ensilage cutter, almost new, one hundred tons per day. Priced. To be paid for in one season. Investigate. Robt. Washington, R. 6, Noblesville, Ind.

FOR SALE OR TRADE—Avery 8-16, new; J. I. Case 36x58 steel, fully equipped; Peerless 18; J. I. Case 15; Star 16; Titan 25; five P & O Plows; 34x56 Pitts, fully equipped; 3-H. P. portable; 4-H. P. stationary; injectors, safety valves. Will trade for automobiles. J. N. Britz, Aurora, Ill.

FOR SALE—Five-bottom independent beam self lift Avery plow, with stubble and also new combination bottoms and rolling coulters. Six-bottom independent beam automatic lift Case plow with combination bottoms, used only one week, perfect condition, cheap. Schmidt Albrecht Co., Watertown, Wis.

FOR SALE—80 acres, \$50 an acre, \$1500 cash, balance eight year's time. Ten acres field, twenty acres ready to break, fifteen acres meadow, balance easily cleared. Six miles from town. Will take steam engine or separator in trade in place of cash payment. Norman Engbreton, Eagle Bend, Minn.

FOR SALE—22 double Gaar-Scott, No. 13459; 22 single, No. 14639; 18 single, No. 14132; 20 Rumely, No. 4559; 22 Stevens. All good engines. Two No. 6 Birdsell hullers, practically new. Choice, \$650. 36 Advance, 34 Pitts, 40 Russell, separators. Bargains. 40-inch Garden City feeder, \$100. Box 345, Crystal Lake, Ill.

FOR SALE—20-75 Nichols & Shepard double cylinder steam plow engine; 36x56 all steel Nichols & Shepard separator, complete with feeder, weigher, wind stacker, drive belt, tank, trucks, etc.; looks and runs like new, and guaranteed. Will sell for one-half price of new outfit f. o. b. here. Don't buy a new rig until you see this one. Address Box 231, Lodge Pole, Nebr.

FOR SALE—K. W. magneto Model H. K. four-cylinder, like new. Bosch magneto Type Arh, good shape, counter shaft 2"x4½", four-step pulley, 22" to 26", pulley 12"x9", complete with hangers and oil drops. Five-bottom Avery independent beam self lift plow, mouldboards a little rusty, one coulters missing, otherwise in fair shape. Parts from a 20-35 Avery tractor. Wm. Stevenson, Orion Ill.

FOR SALE—A one hundred acre farm, three miles from county seat on gravel road, in Taylor County, Wisconsin. Fifty acres cleared, good six-room house; barn, 32x50 feet, other buildings including machine shed, wood house. Fenced on two sides with woven-wire, and plenty of firewood. Immediate possession if desired. Price \$8500, half cash, balance long time. Object for selling, have larger tract which desire to improve. B. B. Clarke, Madison, Wis.

FOR SALE OR TRADE—For a Rumely OilPull and separator to match—one quarter section land near Karlstad, Minnesota. Price \$40 per acre, encumbered for \$1600. 70 acres under cultivation; 80 acres in pasture. Fair house and granary, good water. S. Erickson, Karlstad, Minn.

FOR SALE OR TRADE—One 32x60 Avery separator with self feeder and blower, complete, ready to go to work. Also one three-ton Avery truck with good body and solid tires, complete. Works are in good shape. For \$650, f. o. b. car. Will take a light car in trade. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—One Avery tractor, 14-28 H. P., run one and one-half seasons; one four-disc Oliver plow, twenty-four-inch discs, one year old; one twenty-four-inch Rumely breaker. Above all in good condition. Will sell the lot for \$1200 or will sell items separately. Home Acres, R. 1, Madison, Wis.

FOR SALE—Ten 40-acre tracts, six 80-acre tracts, and four 160-acre tracts of hardwood cut-over rich clay lands, in Price County, Wisconsin, ranging from \$20 to \$30 an acre. \$500 cash payment on each forty acres, balance long time if desired, six per cent interest. Government bonds of any issue received at par value for cash payment. Don't write unless interested enough to buy if conditions are satisfactory. Closing out offer while land lasts. B. B. Clarke, Madison, Wis.

FOR SALE—A complete section (640 acres) of land in Taylor County, Wisconsin, ten miles from county seat, located on two public highways, schoolhouse opposite one corner, fenced and with shack ready to accommodate small family. Running water, rich clover and timothy pasture, all easily cleared, \$5000 worth of pulp-wood and other timber on tract. Price as a whole, \$50 an acre. \$5000 or more cash, balance as long as desired, six per cent interest. The pasture alone with timber on the tract would pay for it in a few years. B. B. Clarke (Old Sile), Madison, Wis.

FOR SALE—Three 20-H. P. Reeves double engines, simple type; run from three to six years. Two have been used only for threshing. Also three Aultman & Taylor separators, complete, equipped with Garden City feeder, one Peoria weigher and two Hartley weighers. All have swinging spouts. Three complete rigs. In extra good shape—canvasses, jack screws, pitchfork and ten gallons of oil with each rig. Also all the necessary tools and water tanks. Two engines have tenders. Choice of rigs, \$2500. Terms to suit. Write L. Angspurger, 507 E. Grove St., Bloomington, Ill. Better come and see this machinery. It will please you.

FOR SALE OR TRADE—26-40-22-20 and 16-H. P. Advance; 22-and 20-Gaar-Scott; 16-double Rumely; 25-Nichols & Shepard double; 16-Reeves double; 18-H. P. portable Dempster gas engine; two Heiders, 12-20; all sizes of Avery tractors and separators; one three-ton Avery truck, nearly new; one five-ton Avery truck, nearly new; one Reo 5th four-cylinder five-passenger; one Reeves sawmill; one Geiser sawmill, 54-inch inserted tooth saw; all kinds of secondhand weighers; several sets of separator trucks; one 32-and one 36-inch Avery double spiked cylinder; set of house moving trucks. Frank L. Brown, 14 and 16 E. New St., Coffeyville, Kans. Phone 1056.

FOR SALE—One brand new, never used, 12-20, 1920 Rumely, \$1350; brand new, never used, 1920 Avery six-cylinder motor cultivator with beams, twelve shovels, draw-bar attachment, belt pulley attachment, extension rims, \$600; two brand new, never used, 1921, 24-40 roller bearing Avery separators, fully equipped; New 1920 Wallis tractor, used at one tractor demonstration, plowed less than fifteen acres. Can't be told from new, \$1350; 12-25, 1919 Avery, used about thirty days, good as new, \$500; 12-25, 1919 Avery with self guide attachment, used about a week; \$675 buys it. It's bright and shiny as new, not worn a particle; 14-28, 1920 Avery, used about ten days, not worn a bit, paint bright as new, \$1275; 1919, 18-36 Avery, used about fifteen days, not worn any, \$1300; 1920, 28x46 Avery roller bearing separator, threshed about 12,000 bushels last year, \$850. T. W. Maxwell, Shenandoah, Ia.

FOR SALE OR TRADE—20-H. P. Advance, 20-Case, 25-Russell, 22-Case, 16-Reeves, 16-Advance, 36x56 Nichols & Shepard, 36x58 Case, 34x56 Rumely, and others. 40-80 Avery, 40-80 Minneapolis, 30-60 Aultman-Taylor tractors, 16-30 Rumely Oil Pull. This is all late machinery and is changing every week. Write for what you want. C. A. Wiegner, Donnellson, Iowa.

MISCELLANEOUS

WANTED—Repairs for 60-horse Hart-Parr. R. Ensminger, LaHarpe, Kans.

WANTED—80-H. P. Case. F. R. Kurtzbein, Montevideo, Minn.

WANTED—22-inch fully equipped separator. Frank Jacobs, Cove, Ohio.

WANTED—A short log sawmill. J. E. Casebeer, R. 1, Poland, Ind.

TO SELL machinery or other property write, C. C. Shepard, Minneapolis.

WILL TRADE steam engine for portable sawmill. Frank Fameree, Casco, Wis.

WANTED—We sharpen and repoint plowshares. J. A. Loffelmacher, Fairfax, Minn.

WANTED—Angle iron lugs and drive gears for 12-25 Avery. Floyd Chambliss, Shelby, Ohio.

WANTED—Extension rims for 20-H. P. Rumely engine, $\frac{1}{2}$ x 10 x 64". S. R. Graham, R. 2, Box 52, Kingfisher, Okla.

WANTED—Large tractor. Twin City 40-65, Aultman-Taylor 30-60 preferred. James Fogarty, Odell, Ill.

WANTED—Small separator; also 16- to 20-H. P. steamer. Give price. H. P. Hansen, Torino, Ill.

FOR TRADE—New Moline tractor with plows and disc. Will trade for threshing rig. Henry Boeck, Amboy, Minn.

FOR TRADE—Nearly new 20-H. P. steam engine for large tractor. F. A. Matheson, Fairmount, N. D.

WANTED—50-inch steel gearless wind stacker for Case separator. B. F. Buckingham, Prairie City, Ia.

REBUILT SAWMILL, cider press, boilers, steam and gas engines. Roberts Machine Co., East Palestine, Ohio.

WANTED—28 or 32 separator. State age and price. O. E. Swearingen, Neponset, Ill.

WANTED—Set house moving trucks. Cushman engine 4-H. P. Harris Albrow, Marathon, N. Y.

WANTED—Set of steel trucks for house-moving. Give particulars in first letter. Must be a bargain. G. L. Barr, Powell, Wyo.

NOTICE—Party buying my 30-60 Hart-Parr Rumely separator has the first chance to rent 680 acre farm. Joseph Wenzel, Caldwell, Kans.

WANTED—32-inch feeder, 54-inch stacker, Case or Sattley, weigher with cross conveyor. H. Dearlove, Glen View, Ill.

WANTED TO HEAR FROM OWNER of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

BELTS COST MONEY—Have your canvas threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

WANT TO HEAR from party having farm for sale. Give particulars and lowest price. John J. Black, 237th St., Chippewa Falls, Wis.

BOILER TUBES—Boiler Tubes—Secondhand and new. High grade used tubes. Cut to length. Ship anywhere. Get prices. Harris Machinery Co., Minneapolis, Minn.

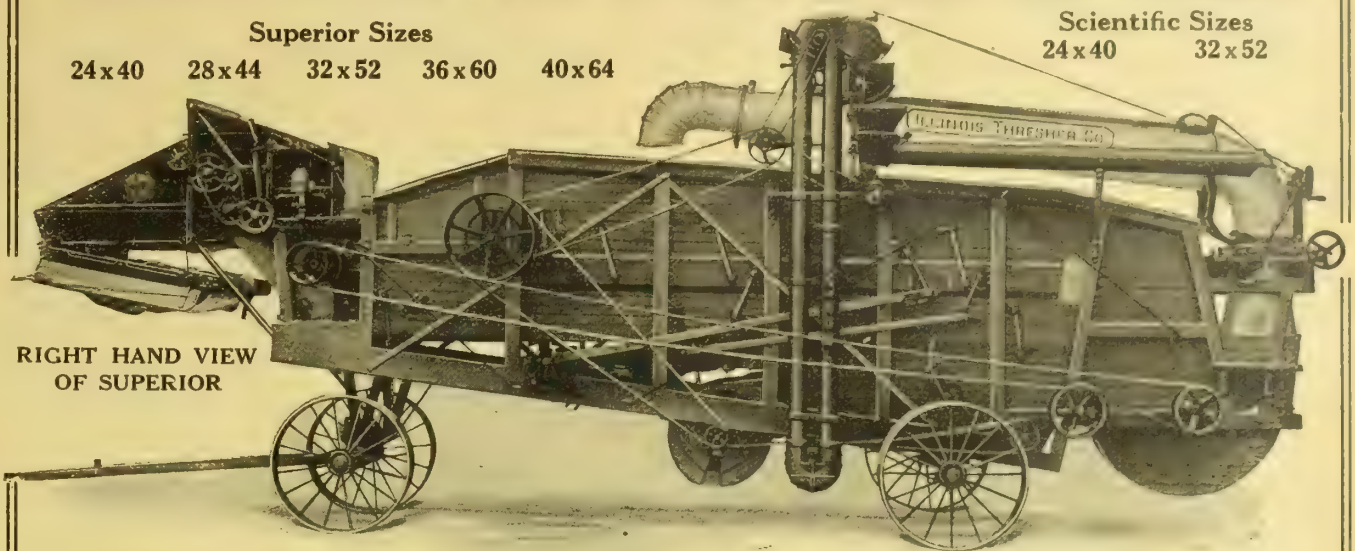
BARGAINS—Pioneer 30-60 tractor with plows, \$1200. Case 32x54 separator, \$650. Waterloo tractors, two speed, \$475 and \$650. Reo car, \$100. Leo Blais, Watertown, S. Dak.

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THE LINE BUILT FOR SIMPLICITY AND DURABILITY
DESIGNED AND BUILT BY WM. N. RUMELY AND FOUNDED ON HIS MANY YEARS OF EXPERIENCE

Superior Sizes
24x40 28x44 32x52 36x60 40x64

Scientific Sizes
24x40 32x52



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The Superior Thresher and the Scientific Combined Huller and Thresher have established the enviable reputation of being the *fastest* and *cleanest* in every neighborhood. They clean and save *all* the grain.

We also have a limited number of our New Improved Steam Engine, 20 H. P. and 25 H. P. sizes.

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HEINEKE SELF FEEDERS—Williams and Red River Special threshers; Steam and gas tractors. Everything for the threshermen. Quick & Thomas Co., Auburn, N. Y.

THRESHER BELT BARGAINS—Greatly reduced prices. Highest grade endless belts, all sizes and lengths. Fully guaranteed. Prices way low. Harris Machinery Co., Minneapolis, Minn.

WANTED—For Avery 36x60 separator, truck with steel axles and ten-inch tires, Ashland adjustable chaffer and riddle carrier for feeder. J. W. Bishop, Washington, Ia.

SUCTION HOSE—Tank Hose—Bargains—Two-inch rubber covered, 15-foot, \$4.00. 20-foot, \$5.25. Canvas covered, 20-foot, \$7.50. Harris Machinery Co., Minneapolis, Minn.

WANTED—All threshermen in Indiana to write us for prices and terms on the Garden City feeder. Important. Place your orders early. Kenney Machinery Co., 124-8 S. Capitol Ave., Indianapolis, Ind.

A FEW OF OUR 1921 BARGAINS

150 ft. 8 in. 4 ply drive belts.....	\$65
125 ft. 8 in. 4 ply drive belts.....	50
125 ft. 7 in. 4 ply drive belts.....	56
100 ft. 7 in. 4 ply drive belts.....	42
100 ft. 6 in. 4 ply drive belts.....	38
75 ft. 6 in. 4 ply drive belts.....	28
Belts are very best quality and warranted in every way.	
15 ft. 2 in. wire lined tank hose...	7.50
20 ft. 2 in. wire lined tank hose...	10.00
1 in. hard rubber injector hose, foot.	.25
3/4 inch injectors.....	8.00
Tank pump leathers.....	.30
3-ton lifting jacks.....	6.50
6-ton lifting jacks.....	8.50
Boiler flues, foot.....	.20
Tank pumps.....	11.00

We have a complete line of thresher supplies of the best quality and our prices will save you money.

We are state agents for the Aultman & Taylor Machinery Company and the Minneapolis Threshing Machine Company and have the largest stock of good second-hand machinery in the middle west.

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CORDWOOD SAWS—Cordwood Saws—26-inch, \$6.40. 28-inch, \$7.40. 30-inch, \$8.40. Guaranteed saws. Saw frames. Mandrels. Belting. Everything. Harris Machinery Co., Minneapolis, Minn.

CANVAS STITCHED ENDLESS belts—Highest grade material and construction, fully guaranteed. 75-foot, 7-inch, 4-ply, \$30. All other sizes. Get prices and order now. Harris Machinery Co., Minneapolis, Minn.

The Best Speeds for Tractor Plowing

(Continued from page 7.)

and furrow sole or subsoil is to be much desired in a good plowing job. This is secured by a firmly packed furrow. Here we have an argument for speed. The faster the furrow turns—within certain limits—the better this connection with the subsoil. Furthermore, the faster the furrow is handled the more it is broken up, which is another desirable feature. Both of these requirements are obtained by a two-mile speed, so high speed is not essential.

A great deal more can doubtless be said, pro and con, on this question, yet we are convinced that when the speed at which a plow is drawn exceeds a certain point, under average conditions, the engine and plow are subject to excessive strains. The quality of the work deteriorates at about the same point. What this point is in miles per hour is not very well defined, but we are pretty safe in placing it between one and three-fourths miles and two and one-half miles per hour. Any man who ex-

ceeds this higher rate is showing a disregard of his tractor plow's quality—and, in certain soils and slopes, a disregard for his personal safety.

The difference between the price of coal at the mines and at your door indicates that the railroads are making expenses now.—Tacoma Ledger.

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest references. Prompt service. Reasonable terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.

Our Disc-Jointer
Extra strong. Simple in construction. Takes the place of both old style coulters and jointer. Relieves side draft. Lightens loads. Puts trash and weedseed in bottom of furrow.
Price \$8.00
Cash with order. Mention make of your plow.
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Handling Lime with Farm Power

(Continued from page 9.)

Many farmers, especially of sections such as Pennsylvania, still follow the method of burning the limestone, the chief advantage being that it saves the expense of an outfit to crush the limestone. Where only a small amount is needed, all that is necessary is to use the so-called heap method. In this system a layer of

not be used to the best advantage. The most convenient outfit is a combination of crusher and pulverizer, but good results are secured from small pulverizers, although in this case a good deal more hand sledging must be done.

The portable outfits may be moved from farm to farm and thus utilize



This Farm Crusher Turns Out Ten Tons of Lime Each Day.

two rows of dry cordwood mixed with lighter kindling is first laid down, next a layer of coal, next a layer of limestone, and above this several alternate layers of limestone and coal. One part of coal should burn several parts of limestone. The outside of this heap is covered with soil and the kindling ignited. The burning of the wood and coal turns the whole amount of broken limestone into burned lime, the carbon dioxide escaping as a gas through an opening left in the top of the heap for this purpose. The process is not completely satisfactory unless the gas is allowed to escape.

This method produces a lime which is mixed with ashes, but as coal ashes are harmless and the wood ashes beneficial to the soil, no ill effects result from this mixture. Oyster or clam shells may be burned in a similar manner, or may be burned in a special rack made of cordwood. In all cases the heat must be controlled and spaces must be left between the stone or shells for the flames to penetrate.

Where larger quantities of lime are to be made it may be advisable in some cases to construct a small, cylindrical kiln, which may be lined with fire brick or sandstone. This is rarely advisable for the farmer, as it would pay him better to use a home grinding outfit.

The use of small crushers and pulverizers to produce ground limestone has proved satisfactory in many sections. They are naturally not as economical as a large plant but may save high freight rates to inaccessible localities. They are often employed also at off seasons of the year where labor would otherwise

outcrops and save hauling expense. Many farmers have pooled together and purchased crushers co-operatively, as there are usually one or more farmers in a community owning a tractor or other engine adapted to running these machines. This method of aiding one another not only solves the labor problem, but very materially reduces the cost per ton of the lime. Small grinding outfits cost from five hundred dollars and upward, according to size, it demanding a tractor or engine of from 10- to 20-horse power to operate them, turning out about one ton per hour up, depending on the type of rock and the horse power used. It costs from one dollar and fifty cents to three dollars and fifty cents per ton to produce the lime, according to type of rock to be handled and cost of power.

Farmers everywhere have had experience sufficient to know now that lime has its recognized place in modern agriculture, and that, in building up soil by proper crop rotations, which include legumes, lime is essential. The limestone soils are universally fertile, so that the application of lime on those lands depleted of this element pays the farmer profits.

The famous black soils of India and Russia are derived from limestone. The irrigated regions of the West are famous for their productive capacity when irrigation water is applied, and they are invariably well supplied with limestone. But unfortunately, limestone, so essential to the productivity of the soils, is soluble in carbonated water, and may be readily lost from the soil, especially in humid sections. Defi-

nite data from the Rothamsted Experiment Station show that some of these soils contain from two to five per cent limestone, and that the annual loss of limestone from the soil is on an average eight hundred pounds per acre per year. Soils that contained limestone a few years ago are now entirely devoid of it, so fast does it leach away; this shows us the vital importance of applying lime in one of its forms regularly, if we would maintain the productivity of our farms.

The best report now available regarding the comparative value of finely ground limestone and caustic lime upon the production of crops is that of the Pennsylvania Experiment Station, where averages of a period covering thirty-five years' continuous cropping are available. The rotation practiced was corn, oats, wheat and hay. The thirty-five-year average yield of crops on the untreated soil is: Corn, 37.2 bushels; oats, 31.6 bushels; wheat, 13.4 bushels, and hay, 2,460 pounds. Where burnt lime has been used, the yields are: corn, 35.5 bushels; oats, 29.7 bushels; wheat, 14.9 bushels, and hay, 2,492 pounds. Where ground limestone has been used, the yields of crops are: corn, 42 bushels; oats, 34.2 bushels; wheat, 15.6 bushels, and hay, 2,760

pounds. The ground limestone plot has produced a larger yield than has the plot receiving no treatment, while the burnt lime plot has actually produced a smaller yield of corn and oats and about the same yield of wheat and hay. In this direct comparison of burnt lime and ground limestone the latter has produced annually, over the "average" period of thirty-five years, 6.5 bushels of corn, 4.5 bushels of oats, 0.7 bushels of wheat and 278 pounds of hay more than has the burnt lime plot. These are established facts, and are very suggestive regarding the comparative value of the two forms of limestone.

Of course, neither form of limestone can be expected to maintain the productivity of the soil where no provision has been made for addition of phosphorus or the maintenance of the nitrogen supply of the soil. The Pennsylvania soil responds readily to nitrogen and phosphorus, and must therefore be deficient in these important elements; where farm manure is added in addition to the burnt lime the yield of crops is increased by about seventy-five per cent. The soil must be supplied with the other essential soil elements, if best results are to follow the use of lime in any form.

Growing Seeds for Farmers

(Continued from page 8.)

makes the absolute statement that every pound of seed which remains in its warehouse at the close of the season is destroyed.

Of course, California is the banner state in the production of flower seed. At least a thousand acres are given over to the growing of such seed, tons of which are shipped east every season. Sweet peas grow especially well in California, and there is one field near Rodondo which comprises three hundred and fifty acres. When the flowers are in bloom their fragrance is actually oppressive.

It is the same with hay seed as with flower and vegetable seed. Bluegrass comes largely from Kentucky, where its fame has won for its home the title of the Bluegrass State; and from Missouri, it is said, more than one hundred thousand bushels of Bluegrass seed are shipped from a single railroad station each season. The region around King City is especially famous for this seed, where two or three hundred power machines are operated to strip it from the plants. The farmers sell the seed in the field, and the harvesting is done by contractors. The price paid isn't large, but it is clear profit, for the grass is just as good for stock as it ever was.

Much of the crimson clover seed comes from Delaware and Maryland.

Millet grows best in the southern states. Kansas and Missouri are famous for their alfalfa seed. It is a comparatively simple matter to prepare clover and similar seeds for market, but much more work is required to handle vegetable seeds,—especially those of cucumbers, tomatoes and melons,—which have pulpy fruit. Usually water is used to wash the pulp from the seeds, and oftentimes large wire cylinders are placed over a pit and the pulp made to pass through them. Sometimes a stream or ditch is dammed to make a little pond, and a flume leads to the washer, where from one thousand to fifteen hundred pounds of seed can be cleaned in a ten-hour day. After being washed the seeds are spread on drying racks and stirred to hasten the drying process, after which they are packed in bags for shipment to the seedsmen.

Many farmers can increase their farm profits by raising marketable seeds. Often grass and silage is just as good with the seed removed the slight amount of additional work makes a lot more profit for the seed farmer. The Secretary of Agriculture, in February, 1921, made the statement that congress had just increased by fifty per cent the appropriation to buy seeds for congressmen. At this rate, there should never be a lack of markets for seeds.

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The **AMERICAN THRESHERMAN AND FARM POWER**

MADISON WIS.

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APRIL 1921

Vol. 23 No. 12

YEARLY SUBSCRIPTION PRICE ONE DOLLAR



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THROUGH many Summers our Thresherman's Settlement Book has accompanied the majority of America's threshermen into the field. It has become a part of the modern rig.

The task of keeping an accurate record of your work is greatly simplified by the use of this little book. It imparts system to your business, saves time, prevents errors.

A clear, concise record of the work, day by day, quickly and easily available, is the surest foundation upon which to plan for an ex-

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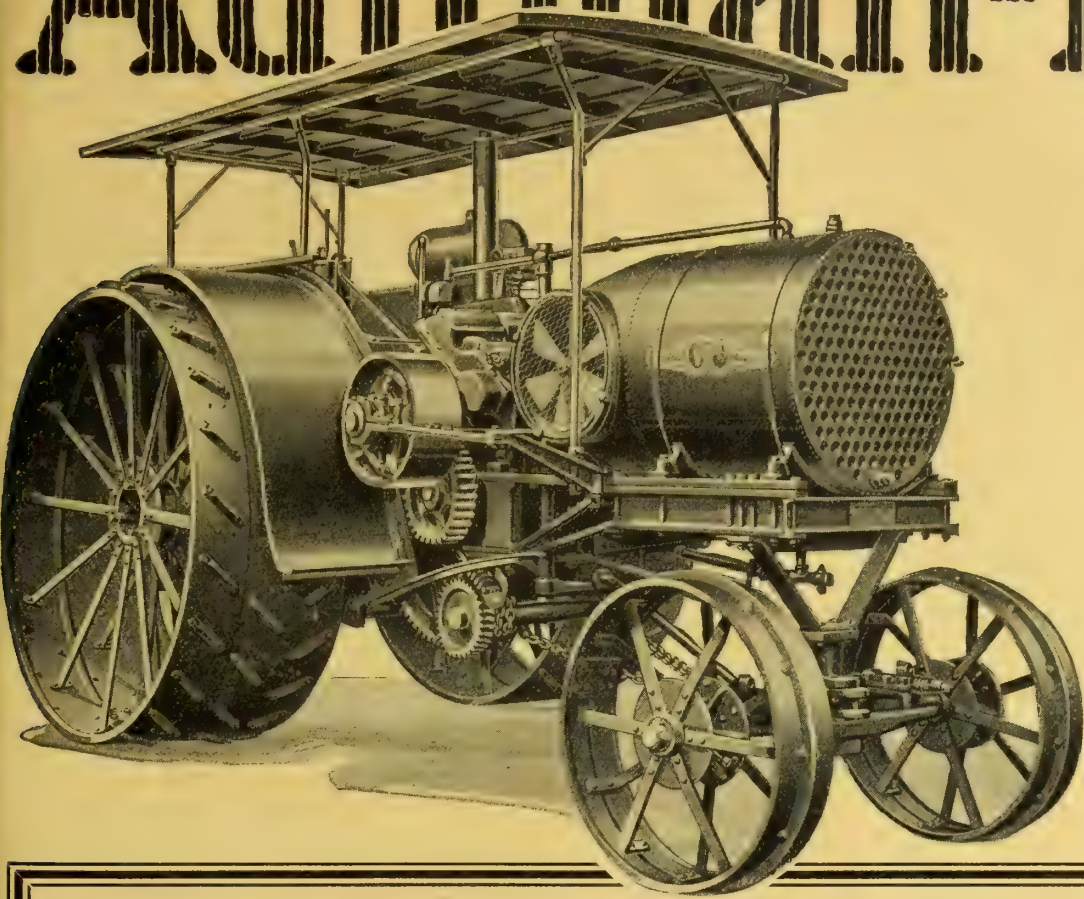
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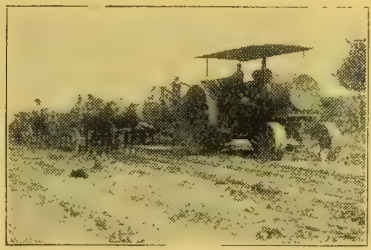
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BBETTER roads in your community mean better living—increased acre value on your farm and bigger profits through better transportation.

Aultman-Taylor Road Building Tractors—the 30-60, 22-45 and 15-30—have turned thousands of miles of bad roads into good, improved highways—at a per mile cost that is almost unbelievable.

Compared to horse labor you can *save from 50% to 75% in your road building costs, build double the number of miles in the same time and build them better—with an Aultman-Taylor Tractor.* In fact, you can build two miles of dirt road to one built with horses—at one-half the cost per mile. Road building officials in practically every state in the Union will endorse this statement.

One big reason for the unqualified success of these Road Tractors is their proper weight distribution. Aultman-Taylor Tractors give you the right amount of weight—just where you need it. And they have the power and endurance to put through any road building job.



The best effort of our 56 years' experience in building farm power machinery has developed in these machines an engineering correctness found in no other similar line of tractors.

An investigation invariably leads to the adoption of Aultman-Taylor Road Building Tractors. Send for our new Road Building Booklet. Read the letters from the hundreds of road officials. Write today.

The Aultman & Taylor Machinery Co.
Mansfield Ohio

*Read what these
Threshermen say:*

"On a test of The Grain-Saving Stacker we found it saved from one to three per cent, or about one to two bushels on every one hundred bushels threshed. Our customers are pleased, as they are now getting what in former years they lost in the straw. We certainly could not afford now to do without The Grain-Saving Wind Stacker."—Brown and Card, Ryegate, Montana.



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THRESHING TIME—all hands busy! Everybody going at top speed! No let-up except for emergencies. Sieves and tail board may need adjusting, improper speed variations may exist, but you haven't the time to stop and correct these grain-wasting conditions.

The straw may be tough, damp or brittle—pitchers careless—other difficulties arise, but you've got to make the best of it. Your customer is in a big hurry to get through—every hour means heavy expense to him. You have many jobs ahead, and must keep going; yet all the while your threshing machine is wasting grain beyond recall—putting it over into the stack—losing money for you and losing money for your customer.

Why take these losses year after year when there is no need to? The Grain-Saving Wind Stacker on your threshing machine is a check on all grain-wasting conditions—*puts the grain in the sack where it belongs* and NOT in the stack. Actual tests show the average saving to be one to three per cent more grain. Farmers throughout the United States and Canada are now *demanding* The Grain-Saving Wind Stacker on their threshing jobs.

The Grain-Saving Wind Stacker is the greatest improvement in threshing in the

last quarter century. Grain trap in stacker catches the grain and unthreshed heads that otherwise are wasted by the threshing machine—blown to the stack.

Leading manufacturers of threshing machines in the United States and Canada have adopted The Grain-Saving Wind Stacker. Many supply it exclusively. Others can supply it if you demand it and insist on having it. Specify this stacker on the thresher you buy or hire this year. Accept no other. Ask your dealer or any threshing machine agent.

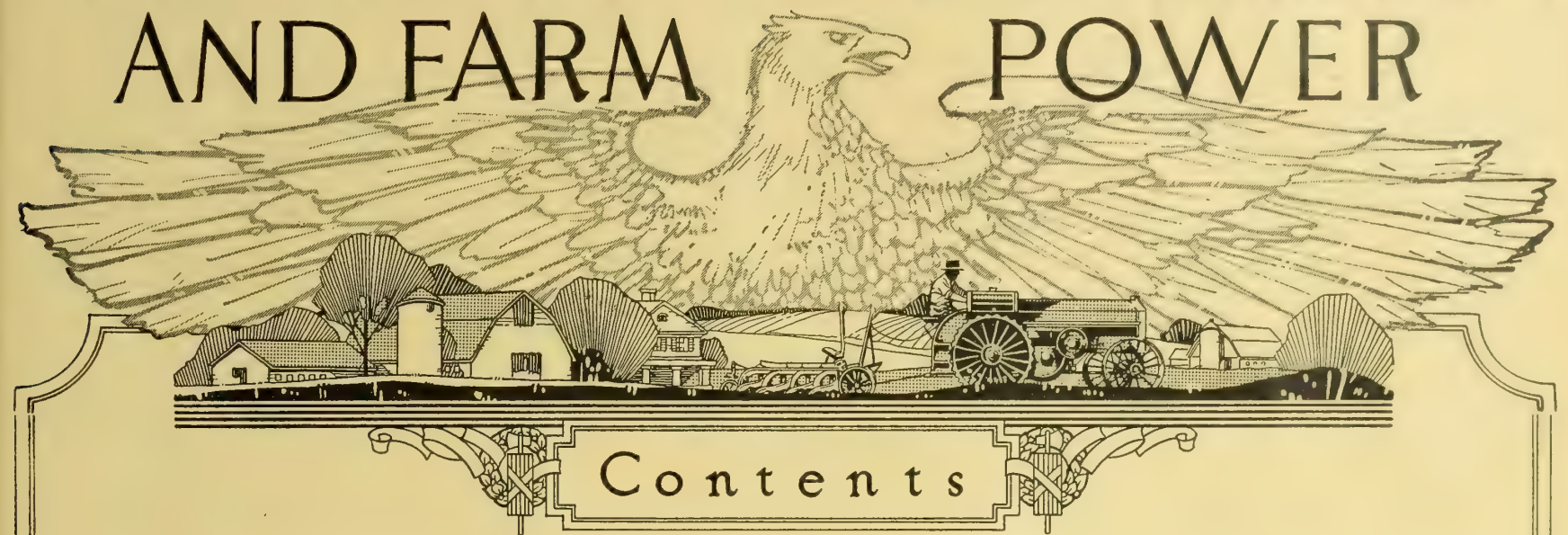


This trade-mark (in colors) is on each side of The Grain-Saving Wind Stacker. It is the trade-mark that farmers and threshermen know as identifying The Grain-Saving Wind Stacker—the stacker which puts the grain in the SACK and does not waste it in the stack.

*The Grain-Saving Wind Stacker originated with
The Indiana Manufacturing Company, Indianapolis, U. S. A.*

The GRAIN-SAVING Wind Stacker

The AMERICAN THRESHERMAN AND FARM POWER



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The AMERICAN THRESHERMAN and FARM POWER

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No. 12.

Individualize Your Farm

BY CAROL C. CRAIN

A NAME," said old Benjamin Fuller, long since resting in his grave, "is a kind of face whereby one is known." Yes, it is an insignia or sign or trade-mark, so to speak, that goes a long way in giving any person that which is called his personality.

Therefore, upon an individual, a name bestows individuality. To an inanimate object a name gives distinction because it differentiates that particular object from all others of other classes and the same class, too.

And such is the psychology of names that any name is better than no name. However, a name is either comparatively a knock or a boost. Therefore, in the selection of a name for the farm, extreme care should be taken so that the title will fit as neatly as a kid glove on a lady's hand.

Originality should be the keynote. Don't copy some other fellow's idea. Get out of the path that countless predecessors have trod. For instance, "Cloverdale" is too trite. It is too common to be used effectively as a farm name.

In nearly every community one will easily create a "Lakeside," "Brookside," "Riverside," or some other "side." They are not suitable. Generally, this class of names or the "dale" class should be ruled out on the ground of lack of originality.

It can be said with considerable truth that a name is successful in exact proportion to its newness. This does not mean that a name should go to an extreme in this direction and be positively bizarre, but it does mean that the name should have the skillful appeal and the pleasing tang thatantalizes and wins the attention of all who see or hear it.

There are as many possible names as there are words in the English language. Countless combinations can also be made without resorting to the doubtful expedient of borrowing some other person's previous conception. Don't steal your title; invent it, create it, and be proud of the distinction it lends to your farm.

In any given district a "Fair View" or a "Pleasant View" can be spotted, and without appreciable difficulty one of the following type may be found: "Beech Grove," "Oak Grove," "Pine Grove," and "Maple Grove." They are all too anal to be used. Something new and original should have the call on such as these.

Study your farm as you would a Sunday school lesson. Ascertain its natural or added characteristics and incorporate them in the title. Capitalize its character for greater gains to you in the sale of its products. The idea is essentially practical. If the residence is large and white and dig-



Forty Mile Farm, Indiana, Received Its Name Because of Its Wonderful Views.

nified in general appearance, you might go far before finding a better name than "White-House Farm." If the housewife makes a specialty of growing the hyacinth, call it "Hyacinth Farm." If there is a large hill from which the view of sunrise and sunset is filled with grandeur, it might be known as "Golden Hill Farm."

As a rule that is nearly invariable, "hollow," and "valley," and "vale," and "hill" and "dale" are good names to avoid. However, any rule can be wisely broken if there is a strong and sufficient reason. Be your own judge as to this point of procedure.

Possibly the best single adjunct to the getting of a good name is the use of the device which is called alliteration. This is merely similarity of sound or form between words or parts of words. "Sunny Slope," "Weeping Willow," "Big Boulder," and "Flatrock Farm" are excellent examples.

Poets use alliteration with telling effect. They know its power to soothe the human mind. A farm name that has this device is sure to be "catchy." Two words or parts thereof are alliterative if they rhyme, or begin with the same letter or have a similar sound.

In these days of the parcel post and marketing direct from the farm to the consumer, a good name stamped on each package has real advertising value. The farm name will individualize the product if the name is distinct and so original as to rivet the customer's attention and impress it upon his memory.

For instance, there is Sam Jones—plain old Sam, but for all that, he owns a good farm. He sells direct to the consumer, but he never thought a farm name "amounted to much." Here is the idea: if "Jones Golden Hill Butter" pleases, the purchaser will want "Jones Golden Hill Sausage," and will be favorably disposed toward the other "Golden Hill" products. Sam is like Rip Van Winkle who slept for twenty years: but when Sam wakes up, he will name his farm and pave the way for increasing his sales.

Truth is truth! The enterprising owner will not only name his farm but he will do it so carefully as to defy betterment. Originality and alliteration or smoothness of sound are the two North Stars or guides in the wise selection of a title.

It is a sad fact that many men will cheerfully spend ten hours in spreading high-priced paint on their barns—such names as Maple Hill, Oak Hill, Maple Dale, Oak Dale—yet they will object stubbornly to sitting quiet for one hour in studying out better names to describe their farms.

The old saying that "An honest confession is

good for the soul" is as true of everyday life as it is on Sundays. Many a farmer who thought of a good name that furnished an adequate description of his farm has been surprised to find that his wife, his children and his hired help have shown real determination to live up to the farm's fine name. Even a child feels a shame in living at a place called "Green Meadows," when the aforesaid meadows are gray, weedy and full of tin cans.

We have overlooked the value of farm names in this country. They have a stabilizing influence on the younger and coming generation, and can be a power in instilling self-respect and family pride. When a farm has been known in a community for years by a distinctive name, a sentiment grows up around the spot bearing the name.



This Picture Explains How Tree House Farm Received Its Name.

Emergency Hay Crops

By G. B. MORTIMER, UNIVERSITY OF WISCONSIN

THE best hay crops for northern states are clovers, alfalfa, and clover and timothy mixtures. But when these crops fail, as they sometimes do, we must turn to such crops as will fill the mow ready for winter feeding. Of course, choice will have to be made from among the annual crops. Such choice need not be limited to any single crop, for there are several which farmers may select to meet these emergency cases.

Peas and oats, grown in combination, have always been considered a standard "plant-in" hay crop. Although either of these may be used alone, a combination of the two is really better, and should be used where both crops can be grown successfully. The combination will usually yield better than either alone, is more easily harvested than peas alone, because the oats support the peas, and in addition peas are more easily cured when grown in combination.

The two may be seeded at the same time, using one and one-half bushels of each an acre. Medium late oats, such as Pedigree No. 1 or Pedigree No. 5, give very good results, and the Canada Field pea and the Scotch Green Field pea are among the best varieties of peas to use. The peas should be seeded early, the earlier the better, as both crops will stand early seeding.

This mixture is an excellent forage substitute if taken at the right time and properly cured. Cutting should commence when the oats are in the early milk stage. The peas will then be just starting to pod. Delaying longer than this will produce a strawy hay which is less palatable. Well-cured pea and oat hay is nearly equal to red



Hay Conditions Often Call for Emergency Power. A Former Brewer, Now a Farmer, Uses Trucks to Get His Drawbar Power. He Sometimes Beats the Rain by This Method.

clover hay in its content of digestible protein.

Oats alone will make a good emergency hay crop. When grown for this purpose they should be seeded at the same rate as for grain, and cut in the early milk stage.

The fine-stemmed, leafy sorghum known as Sudan grass is the most recent addition to the list of supplementary hay crops. Northern farmers can grow Sudan grass very successfully, as has been demonstrated the last four years in various parts of the Middle West.

Sudan grass prefers a warm, sandy loam soil, but will do very well on any upland soil suitable to small grains. Soils that are worn out or very sandy are not adapted to it, nor are low, wet soils. It should not be seeded before corn planting time, and a week or two later usually gives better results, for it is a crop that flourishes in summer heat. The right time of seeding is one of the main points of success.

With seed that has been well cleaned from all chaffiness and light seeds, twenty-five pounds is sufficient for one acre. With seed of poorer

quality at least thirty pounds should be used. It should be sown broadcast or drilled in upon a well prepared seed bed, care being taken not to bury the seed too deep. Seed this year is especially cheap.

It should be taken for hay when in full bloom and handled the same as timothy. It yields from two to three tons of cured hay an acre and is very palatable, stock eating it readily.

Millet in one of its many varieties is among the oldest of emergency hay crops. Although the German, Hungarian and Japanese varieties may be used, the one known

as Common Foxtail millet is usually regarded the best one for hay. It is finer stemmed and earlier, both advantages in a hay crop.

From three to four pecks of seed an acre is used. The seed should be broadcasted or drilled in, care being taken not to bury it more than one inch deep. Like Sudan grass, millet requires a warm soil, consequently cutting should start when the heads are well out. The plants rapidly grow woody and strawy after this period.

Soybeans for emergency hay purposes have grown rapidly in favor during the last ten years, especially among those who are farming the sandier soils where clover and alfalfa are not likely to do so well. Unlike millets and Sudan grass, both relatively low in protein, soybean hay is very high in digestible protein, being about equal to alfalfa hay. Although it is a little difficult to cure, the palatability and high feeding value of this hay make it a very desirable forage. Remember that, to inoculate soybean seed, only the bacteria of soybean soil should be used.

(Continued on page 52.)



This Tractor Uses a Rear Carrying Truck, Thus Pulling the Wagon and Loader.

Modern Hay Machinery

How Hay Work Has Been Lightened

FARMERS of the United States harvested 108,000,000 tons of hay last year. Even with improved machinery, this represented a vast amount of work, but think how impossible it would have been to handle a crop of this size if old-fashioned methods of hay harvesting still prevailed.

When the mower was invented, it seemed as if the last word had been spoken in speeding up hay-making, but now we must recognize that the mower is only one of many labor-saving devices that have made it possible to raise large crops of hay with the limited amount of man power usually available for the job on the average farm.

The mower, and the improvements that have been made in it, need not be discussed here. Suffice it to say that modern light-running machines make it possible to cut a wide swath with a minimum of effort on the part of the team, whereas the early models cutting a comparatively narrow swath oftentimes were horse killers.

One attachment which should be mentioned before we leave the subject of mowers is the bunching attachment, which is of special value when cutting short grass, or alfalfa or clover which is to be used for seed and which is short and thin on the ground. The writer well remembers an alfalfa field which produced not less than ten dollars' worth of seed to the acre one dry year, and none of this seed was saved. The growth was so short that it was impossible to gather it with a common rake. If the modern bunching attachment had been on the market at that time, it would have meant the saving of several hundred dollars.

Much has been learned in comparatively recent years about the curing of hay to get the highest market price for it. It has been found that hay, cured in a loose swath, will retain its color and sell for a higher price than hay cured as it falls from the mower. This is one of the greatest factors leading to the perfecting of the side delivery rake. The old hand dump rake was a great boon to the hay farmer, the self-dump rake eliminated most of the hard work from the raking job, but the side delivery rake, properly made use of, has greatly increased the quality of the hay produced,—and therefore its market value.

In using the side delivery rake, the hay is allowed to cure only slightly in the swath, and the side delivery rake picks it up and delivers it in a loose windrow through which the air can pass freely and in which most of the hay will be protected from the bleaching action of the sun.

Some side delivery rakes can be adjusted so as

to be used as tedders, thus eliminating the immense amount of work which used to be expended on a field when the hay was turned by hand.

In sections where large quantities of hay are produced, the hay is taken directly from the windrows to the stack or hay barn, by means of a sweep rake, which sometimes is called a push rake or go-devil. The homemade variety of sweep rake usually is built without wheels; the long wooden teeth resting flat on the ground, and one horse being hitched at each side of the rake at the rear. A windrow is followed up, the teeth running under the hay until a sufficient load is accumulated. The loaded sweep rake is then pulled to the stack. In the case of the homemade rake which does not have wheels, it is not convenient to drag the hay in from any great distance; but sweep rakes, mounted on wheels, can be purchased which are so arranged that the teeth and loaded hay can be raised from the ground, and then the hay can be brought in from a considerable distance without undue labor on the part of the team or injury to the hay.

It is possible to get a combination sweep rake and stacker which will hoist the hay and dump it on top of the stack, after it is dragged to the stack from the windrow. Over-shot and swinging stackers also are available, on which the hay can be deposited from a sweep rake without handling by hand.

Often one will see the hay fork type of stacker,

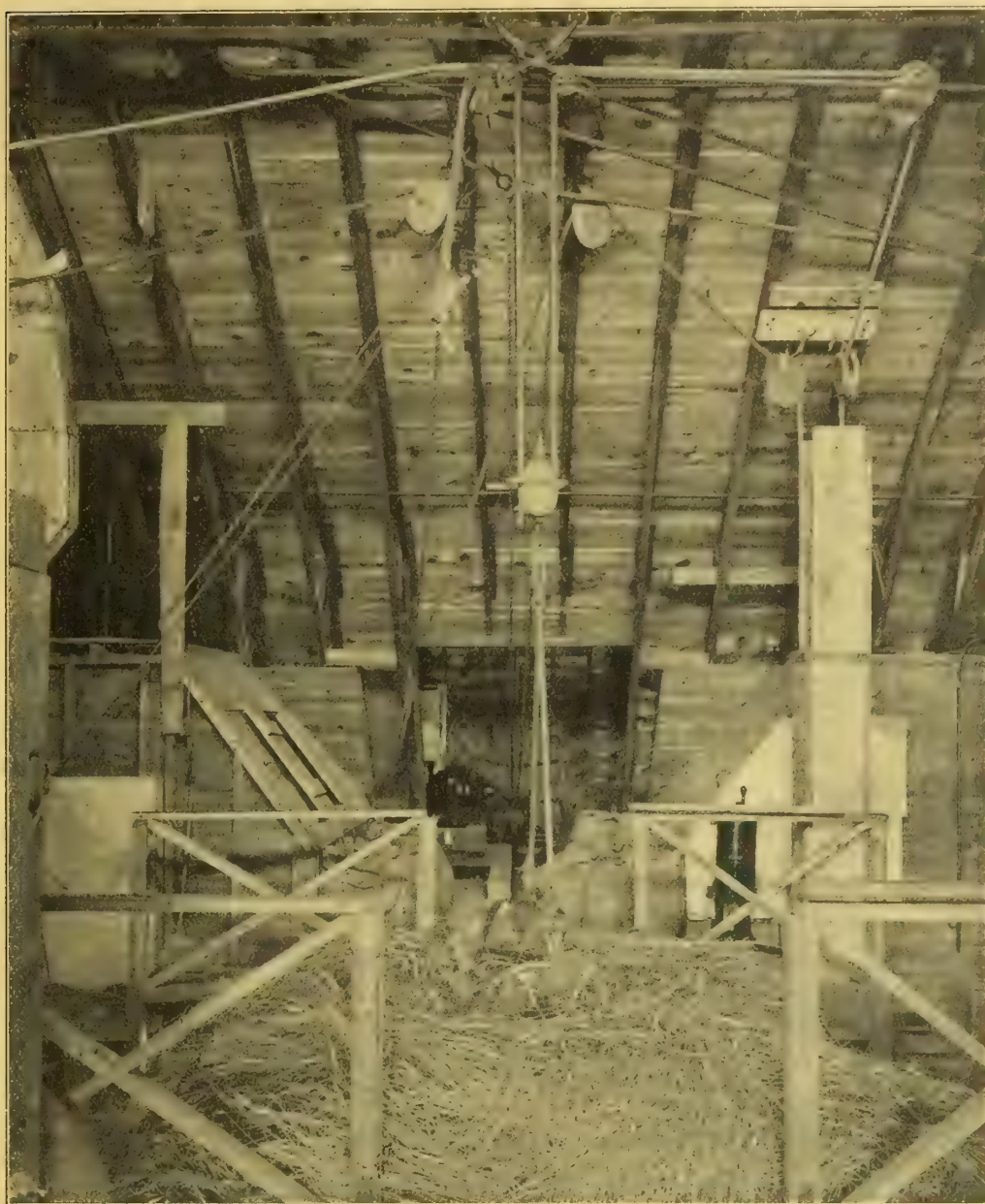
set up in the field, which will take the hay either from a pile deposited by a sweep rake, or from a hay rack. The hay fork usually is not considered quite so convenient for outside stacking, as some of the other types of stackers. For barn use, however, it has no equal in the opinion of most hay farmers. You will find hay hoists in barns, operated by horse power, by gas tractors or even in some cases by electric motors, as is the case in the hoist shown in the illustration with this article.

One of the great problems of the hay farmer has been to find ways to do his work with fewer hands. In many cases, hay has to be hauled for a considerable distance, and wagons must be used. Under such conditions, the hay loader has made it possible to do the same work with two less men. The first hay loaders put out were objected to by many farmers, because they imposed such a heavy load on the team pulling the hay wagon. In the later types of hay loaders, this objection has, to a considerable extent, been overcome.

In most cases, hay which is to be put on the market must be baled. In some classes of hay, it does not

make much difference when the baling is done. In a hay like alfalfa, for instance, where leaves may easily be shattered off, it makes a great deal of difference when the baling is done. In sections where they grow alfalfa hay exclusively, and where they have learned how to handle it to get top market price for it, the hay is not bone dry when it is put into the barn. As it lies there, the moisture in the stem comes out and the whole mass becomes tough. It usually takes about three weeks for this change to take place. This is the proper time to bale the hay. If it is baled while it is in this tough condition, the leaves will be just as thick on the outside of the bale, as on the inside. The leaves must cling to the outside of the bale if the hay is to bring the top price. If the hay is baled during the winter when the hay is perfectly dry, the bales will have just as much food value in them, but the hay will be more or less broken up and very few leaves will show on the surface of the bale. The hay will go on the market one grade lower than if it had been baled at the proper time. After the hay is baled, it still must be protected from the weather to avoid bleaching. The appearance of the surface of the bale determines to a considerable extent the price it will sell for.

With the present modern types of hay machinery available it certainly is worth the while of any man who does much hay work to make sure he has the best equipment for his purpose before the hay season starts.



Motor and Controller Operating Hay Hoist in the Barn of a New York Farmer.

The Care of the Mowing Machine

By G. G. McVICKER

ALFAFA is one of the most profitable crops on the modern farm. Therefore it is well for the farmer to provide for its quick and proper harvest, as well as to provide a suitable seed bed for its growing. And the mowing machine is the first tool to prepare for the job.

Since the days when backs ached to the swing of the scythe, this machine has been improved, until today it is one of the most perfect farm tools in modern use. But unless it is kept in proper running order, it becomes one of the greatest time losers of any of the labor-saving machines.

Alfalfa means that the haying campaign can not be left until all the other summer's work is completed, as was the case when the native grass of the prairies furnished the hay for stock.

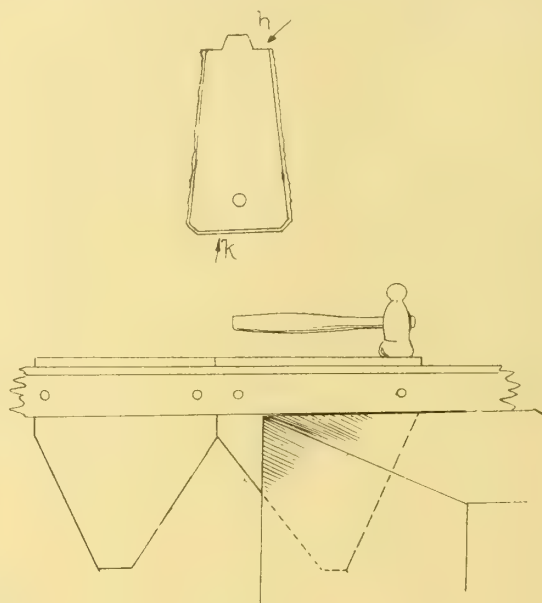
The first cutting usually comes at the busiest part of the season, in the corn belt territory. It necessitates the best continuous use of every hour; for this reason the needed repairs should be made before the strenuous time arrives.

A new mower is ready for operation without other attention than oil and grease; but beginning with the third, or possibly the second, season, adjustments are needed, and a stock of new parts should be at hand before the haying time arrives if valuable time, horse flesh and a profitable crop are saved.

In purchasing a mower, the proper size depends somewhat on the acreage; but perhaps the size should depend on the conditions of the fields more than on the acreage. On rough, uneven fields a smaller sized machine is perhaps the most practical, but otherwise the larger one is always better. The following shows what a day's work for the various length of cutting bars should be with a

economical, because the cutting knives make the same number of strokes in the large machine as they do in the small one. Then, in a four-foot machine, the wear would be twice what it would be in an eight-foot machine.

It is true that the strain is slightly more on the parts of the larger machine, but these parts are made in proportion and will easily assume strain without showing greater wear. The strain on the



Figures 3 and 4. Grind the Ends of the Ledger Plate to Make a Good Fit.

team is more while they are pulling the machine but not twice as much, because only the extra strain of cutting and a small addition of weight is added, but not twice the weight of the four-foot machine. Only half the number of rounds or hours is necessary. It is frequently argued that with the points of the guards tipped upward easier cutting is attained. This may be true in heavy weeds because of the fact that the bar will gradually climb somewhat higher than the level, by the guards being so tipped, but the actual cutting is not made much easier. It is true that a stick may be easier cut with a knife when cut at a slanting stroke but with a mower knife it is different. If the mower knife section could cut the stems from the back side (see Figure 1) easier cutting would be the result; but the knife edge sets at an angle with the stem. It does not have the advantage of the sloping cut. The mower knife has to enter the stem from the side and not from the back. A greater cross section of the stem has to be cut when the guards are tipped when run on a level.

Cutting with the outer end of the bar raised or lowered from a horizontal position throws the driving parts out of line. In some machines the sections being out of time with the guards cause an undue strain on all parts. This practice should be followed only when necessary.

In overhauling the machine the cutting bar and its working parts require special attention. Bearings and boxes, shafts and gears, all need their care, of course; but such repairs come in line with like repairs on other machinery and will not be discussed here.

Ledger plates, thrust plates, keepers, guards and sections may be renewed. In no case is it advisable to attempt to repair them by pounding out, shimming up or changing places. The same is true with the bearings at either end of the pitman or connecting rod. Simple adjustments are usually provided for these.

In fitting new ledger plates, all dirt must be removed from the socket into which the front end of the plate fits, otherwise the plate can not be riveted to the correct place but will remain extended above where it belongs. If for any reason the plate will not fit down to place, it should be ground, as shown at H or K in Figure 3, until it does fit. Before grinding off either end to make the plate fit, note how the rivet hole coincides with the hole in the guard and grind the end to make them fit in accordance. The rivet head must be flush on top. If it protrudes above, after riveting, cut it off with a sharp chisel or file, either with the guard held in the vise or after it is bolted to the bar.

To remove the old sections from the sickle bar, hold the bar on top of a square-edge metal block or in a vise with the section over the edge or between the jaws. Strike on the top of the section over each rivet a couple of good sharp blows. (See Figure 5.) This will shear off the rivets with a clean cut, so they will not be hard to remove from the section or bar. This process will probably cause a curve to the bar when the sections have been removed and if so it should be straightened before the new sections are riveted on.

In re-riveting the new sections, do not pound the rivets more than is really necessary to make a good hold. Usually a couple of good blows with a two-pound hammer will be sufficient. More than this may warp or twist the bar, and such kinks are almost impossible to remove after the sections have been riveted on.

To remove old ledger plates, place a heavy piece of iron, for an anvil, under the guard while it is yet on the bar. With a punch that is the

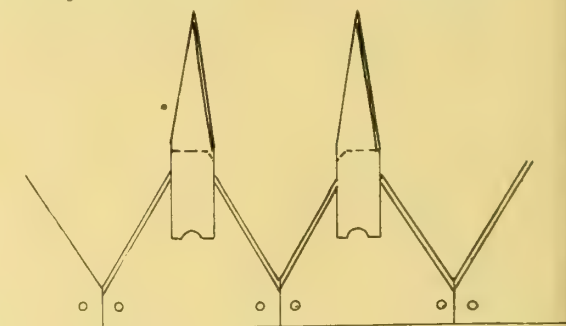


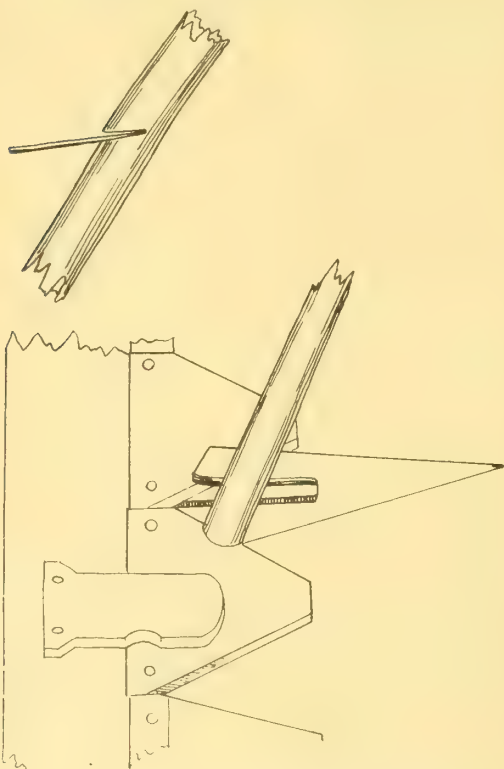
Figure 5.

same size as the rivet, drive the rivet out. The slightly countersunk head of the old rivet will not interfere with this. The edges of the head will either be sheared off or bent up, and will allow the rivet to pass through easily.

If on replacing the new plate it is left higher than either of those on its neighbor guard, the cutting edge of the section (see B in Figure 6) will become beveled on the bottom by continuous thrusting against the higher plate. This soon destroys the cutting edge of the section, so that it will not form a shearing action. The same defect will hold the two side sections above the plates and will allow the grass to be drawn in between the two in place of clipping it properly. The same thing is true when a short up-or-down kink is left in the section bar. The action of the grass pulling down on the sections as the mower moves forward should hold them to the ledger plates. Where defects make this impossible, hard cutting and hard pulling is the result.

A guard with too sharp a point will bother more in damp grass than one that is somewhat more blunt. This is because the sharp point will

(Continued on page 40.)



Figures 1 and 2. A Knife Will Cut a Stick at an Angle. But Setting the Sickle Bar at an Angle Fails to Accomplish This.

team making twenty miles in an ordinary ten hours' run, which is near the average speed at which a team works.

Four-foot bar.....	10 acres
Five-foot bar.....	12½ acres
Six-foot bar.....	15 acres
Seven-foot bar.....	17½ acres
Eight-foot bar.....	20 acres

When the ground surface will permit it, the large machine is the most practical and most

The Home of Sudan Grass Seed

By W. D. HORNADAY

It was about ten years ago that one of the traveling representatives of the United States Department of Agriculture was making a journey through a remote part of the Sudan in Egypt, in search for possible serviceable plants that could be introduced into the United States. At an oasis where the caravan of camels with which he was traveling stopped for rest and water, a strange species of wild grass was found growing. The seed of the grass was ripe and a very small quantity of it was gathered by this enterprising American agricultural scout and forwarded by him to the Department of Agriculture at Washington. In due time this packet of seed from the Sudan found its way to the Government experimental station at Chillicothe, Texas. It was planted and produced an abundant yield the first season. It was classified as belonging to the sorghum family and closely allied to that agricultural pest, called Johnson grass. The difference between the two, however, is that while Johnson grass spreads rapidly from the roots and is difficult to control or exterminate on that account, Sudan grass propagates only from the seed and can no more become a pest than can its near kinsmen—kafir corn, milo maize and other sorghum grains. It was found, however, that when planted adjacent to any of these kindred varieties of crops, Sudan grass became a hybrid and lost its original high forage qualities.

It was in 1912 that the experiment station at Chillicothe sent out its first Sudan seed for commercial planting. The seeds were distributed among a few farmers of the community around Lubbock, Texas. This town is situated in the South Plains region of west Texas, where agriculture is comparatively new. It was an ideal locality for the test of the new seed on account of the purity of the soil and favorable climatic conditions, as was proved by the wonderful success of the first and all subsequent years planting. Wide attention was attracted to the new crop and the demand for seed was far greater than the available supply.

The far reaching possibilities of Sudan grass as a forage crop were quickly recognized by the farmers of the Lubbock section and they immediately took steps

to protect the purity of the seed. Although Johnson grass and other field pests were as yet unknown there, it was deemed best to take every precaution against their possible introduction and contamination of the Sudan grass seed.

The growers of the new product organized an association for the purpose of effecting and

seed, pending its sale and distribution. When the fact is considered that the average yield of seed is one thousand to one thousand and five hundred pounds to the acre, the profitability of the industry during the first two or three years following its introduction may be realized.

In every respect have the good qualities of

Sudan grass as a forage crop, which were predicted when it was first introduced, been proved, according to farmers who have been growing it for several years. The coöperative association that functioned during the first two years following its organization accomplished all of its purposes, it is asserted. These consisted of establishing rules and regulations for maintaining the purity of the seed, which are still closely adhered to, and the widening of the market of the product. With the disbanding of the association, wholesale dealers took over the

marketing end of the business. They deal direct with the growers. Naturally, with the development of the industry the price of the seed gradually decreased until it is selling this season for three to five cents a pound.

In what is known as the pure seed territory of the Lubbock region, approximately ten thousand acres of Sudan grass were grown last year. It gives two cuttings each season. The first crop is threshed, and occasionally the seed of the second cutting is threshed, but for the most part it is used wholly for forage. The average yield of the two cuttings is three tons of forage. It is asserted that as a stock feed Sudan grass is nearly equal to alfalfa. It is specially suited for dairy cattle and hogs, and as a result of the extensive production of the forage around Lubbock the dairying and hog-raising interests there have showed wonderful development during the last few years.

It is significant, however, that although Sudan grass is now grown in nearly all parts of Texas and has during the last year or two been successfully introduced into the Central states, the only locality where a specialty is made of raising it for seed is around Lubbock. The established reputation which the Lubbock seed has for purity causes it to be in great demand and there promises to be an increase of the acreage



The Sudan Grass Harvest Field Looks Like a Western Wheat Field.

guaranteeing the purity of the seed and to market it in a systematic manner. It was in the nature of a coöperative organization. Rules were laid down and rigidly enforced by inspectors, regulating the growing and planting of the crop. The planting of any other kind of sorghum grains within a stipulated distance of Sudan grass was prohibited. The inspectors also went through the fields of the new forage crop at intervals of every few days and wherever they found a stalk of maize, kafir corn or other kind of kindred grains growing, they cut it down. In this manner the purity of the Sudan grass seed was protected. The seed was in such demand that it sold readily during the first two years that it was grown in the Lubbock section for one dollar to one dollar and fifty cents a pound. A large warehouse was built and operated at Lubbock for the storage of the



This Picture Shows the Thick, Fall Growth of Sudan Grass.

(Continued on page 40.)

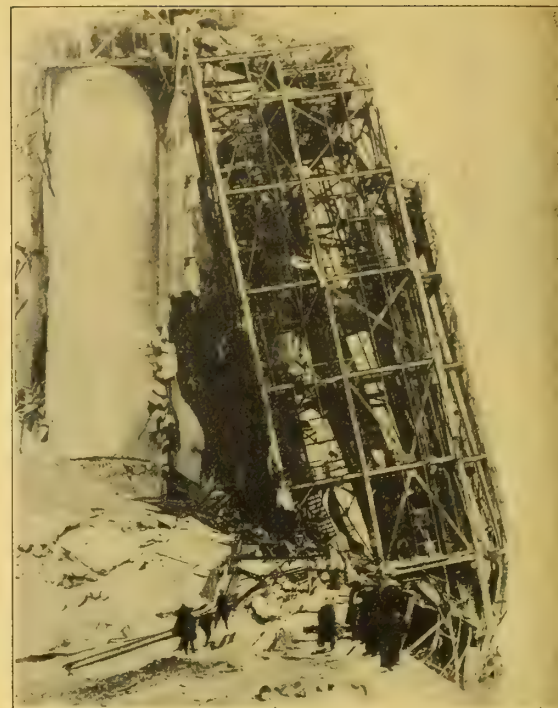
World's Largest Grain Elevator Wrecked by Dust Explosion

By ROBERT H. MOULTON

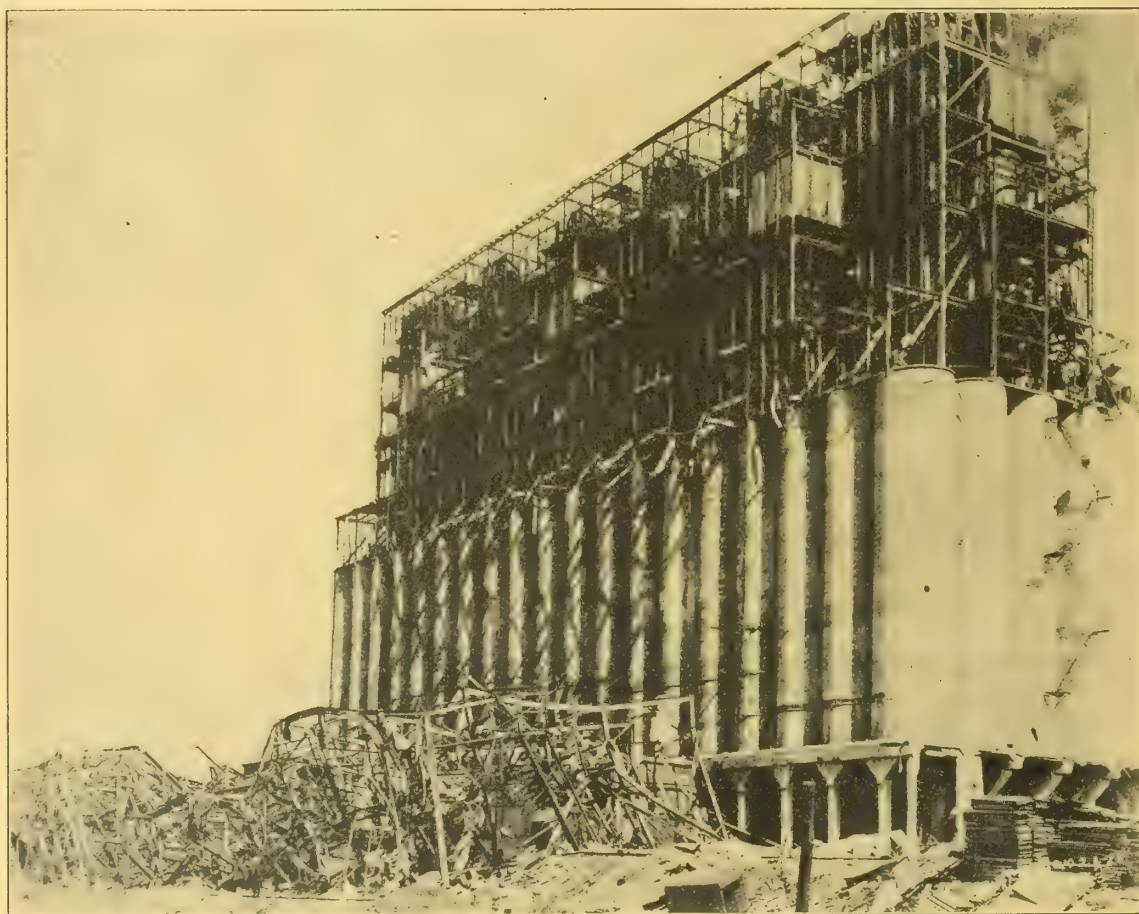
THE terrific force of grain dust explosions was emphasized in a startling manner on March 19, 1921, when the recently completed elevator of the Northwestern Railroad at South Chicago, Illinois, was completely wrecked by a blast of this nature. The elevator, which cost \$3,000,000, had a capacity of ten million bushels of grain and was the largest and most modern structure of its kind in the world. At the time of the explosion the elevator contained approximately seven million bushels of grain, considerable of which can be saved, although the damage to the elevator

itself represents complete loss except as it may be covered by insurance. The force of the blast was felt for five miles in every direction and freight cars a half mile from the plant were unroofed, while a few cars which were in the plant itself were totally destroyed. Only four lives were lost in the explosion, so far as is now known, although the loss undoubtedly would have been much greater but for the fact that a day shift of two hundred men had left the elevator only half an hour before the explosion occurred.

The function of this mammoth plant was not



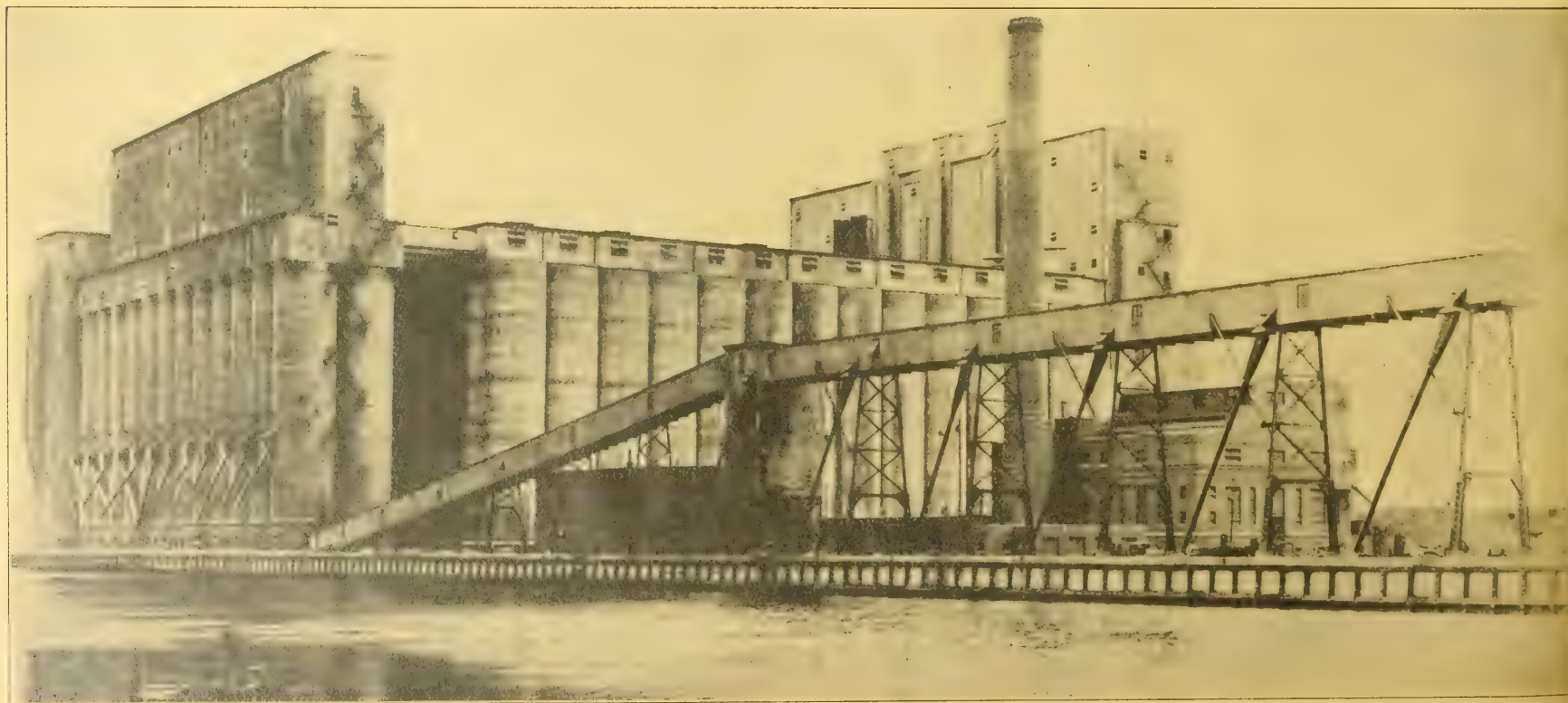
Wreck of the Marine Tower.



View of the Main Structure After the Explosion.

only to provide storage for ten million bushels of grain, but also to handle large volumes of it in a rapid manner. Grain has been received from cars at the rate of thirty-six carloads per hour and from boats at a maximum rate of twenty thousand bushels per hour. The shipping capacity by rail was forty-eight carloads per hour, and the maximum loading capacity of the river house was four hundred and sixty-seven thousand bushels. Its six legs were capable of elevating, weighing and delivering to boats at the rate of one hundred and twenty thousand bushels per hour.

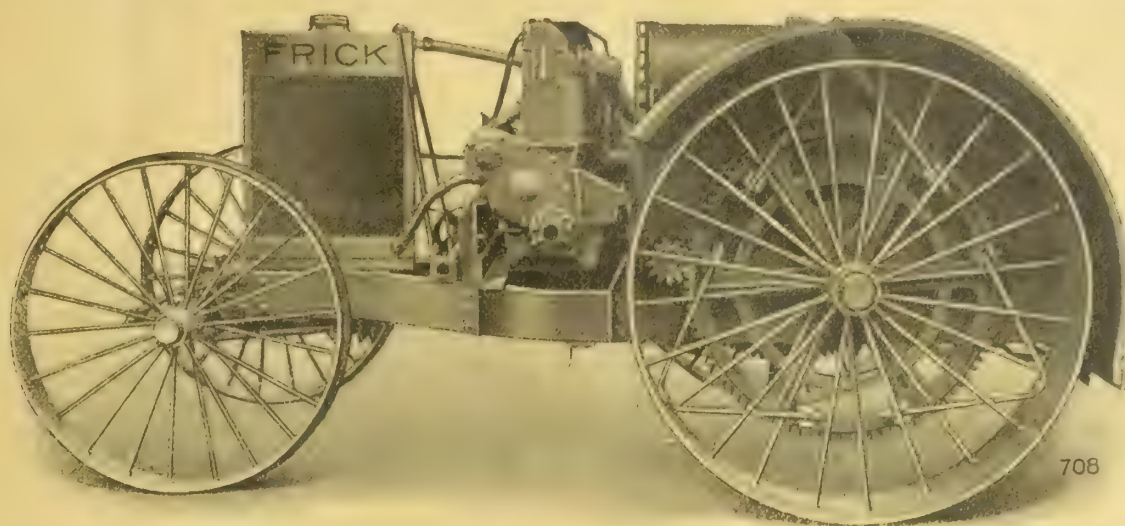
Storage was accomplished by means of one hundred and eighty-two cylindrical bins, each twenty-one feet and eleven inches in diameter by one hundred and five feet in depth, and one hundred and fifty-six interstice bins. Each cylindrical bin had a capacity of thirty-two thousand bushels and each interstice bin eight thousand bushels. The elevator proper occupied a space seventy-seven by two hundred and eighty-five feet and was one hundred and ninety-two feet high. It was electrically operated throughout. At present it is assumed that particles of dust, which sifted from the grain and accumulated on small ledges, were ignited by a spark, possibly from a short circuit.



This Wonderful Elevator Was the Pride of Chicago.

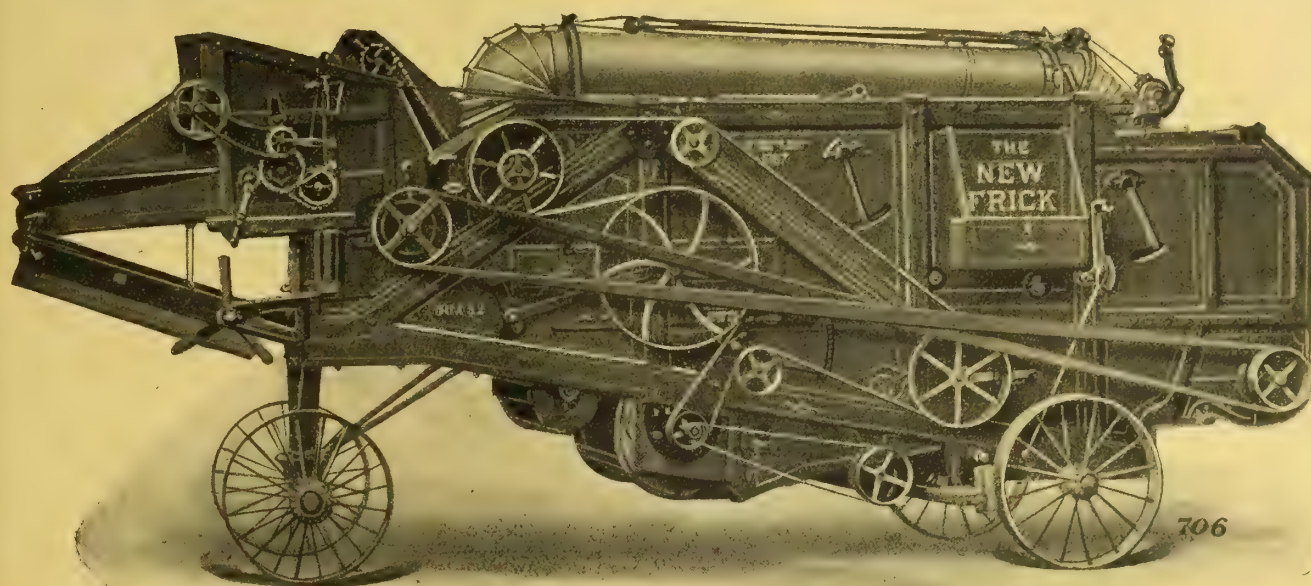
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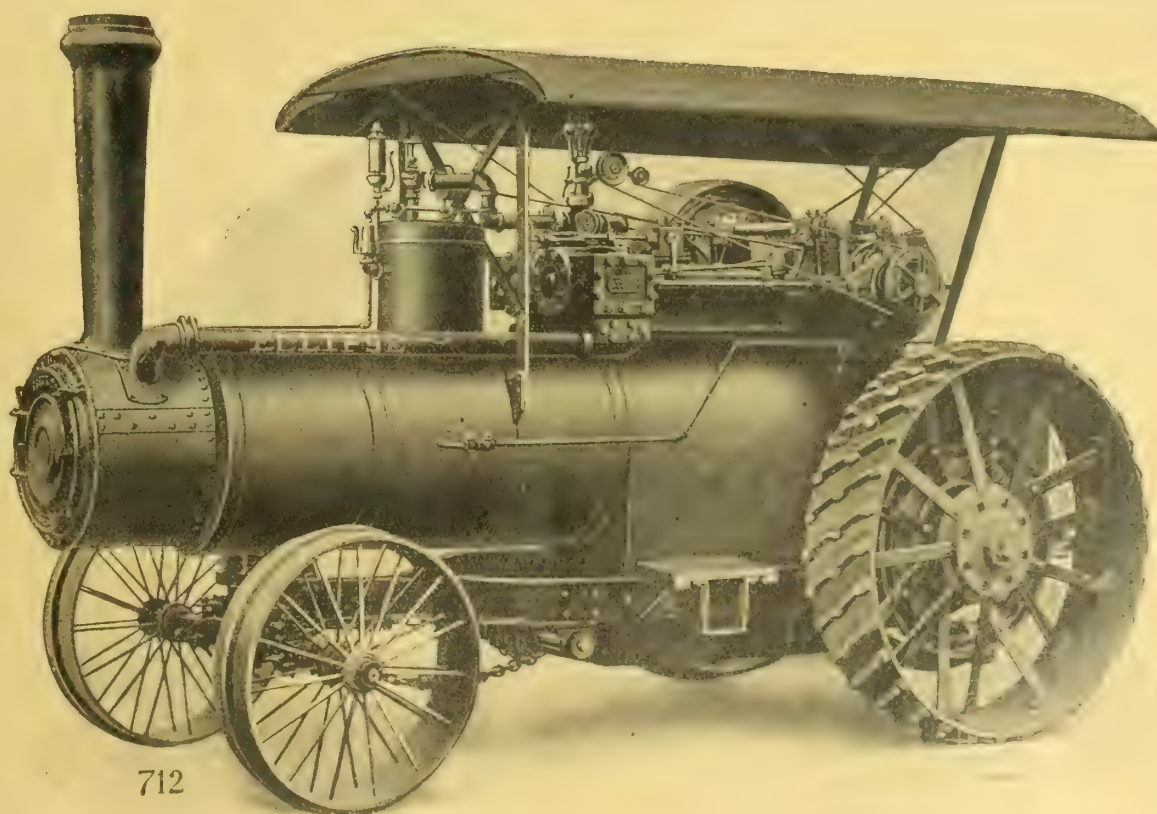
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insure your customer's grain and buildings against fire. You are not ready for the season until your engine is equipped with a SOUTH BEND. Guaranteed spark-proof.

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Listen To Me

REACH down and pull up, don't reach up and pull down.

THE world is only hard on those who make it hard for themselves.

BE square with yourself and the rest of it comes easy. You can't hide being on the square any more than you can hide crookedness. It all comes out.

WE all make mistakes, so let's have the same consideration for the other fellow's mistake as we would want him to have for ours.

MIGHT makes right for sure when might uses the power for the protection of the weak.

MAKE your word good at all costs. The man who does this can always get backing for a legitimate project.

DON'T promise too much. It is far better to do more than you promise to, than to promise more than you can do.

NOW is the time to throw away the hammer and grab a horn. Convince the calamity howlers that they are having pipe dreams.

BE big enough to overlook the small petty digs that are thrown at you; that remedy will cure the knockers.

DO some little good for somebody at every opportunity and see how good it makes you feel.

SHOW the same consideration to others that you expect them to give you and you will have things running pretty smooth for you.

EVERYBODY in the world is good for something and as soon as you find out what that is you will have easy sailing.

WHEN things look dark and blue for you, always remember the sun is right behind the clouds and it is only a matter of time until it comes out again and everything will be rosy.

IT makes no difference what business you are in, you will always find cheaters, but don't let that bother you in any way because they furnish the ammunition and kill themselves off in time.

DON'T be a bully. It doesn't pay in the first place, and in the next place sometime somebody will "call" you and the bigger they are the harder the fall and great is the fall when it does come.

DON'T hold malice in your heart. It will cause you to be unpleasant even to those who are most dear to you and besides that it will make you "sour" on yourself.

IF you have a disagreeable job to perform, go ahead and do it and don't "pass the buck" to someone else. In a little while you will be as full of confidence in yourself as a dog is full of fleas.

MOST men have to die to be appreciated. If you are working with the expectation of having a "fuss" made over your efforts, you are liable to be disappointed. Results and self satisfaction are more apt to be your reward and they are both worth it.

IT is a glorious feeling to know that you are a part of things. I have been both a time killer and one for whom the clock did not have hours enough to do my work in, and I would rather have one day of doing things than all the time I wasted.

DON'T get the "mullygrubs" and down at the mouth and go around "mooching" because everybody will get the idea you are a "crab." They will pass you up for a "bellyacher." Pull a grin and watch the gang be with you all the way.

YOU may not get to the top but you can get as near the top as you can. To do this you must keep right on plugging, for if you stop to complain about the fellow that is up there, you will get shoved out of the way by the fellow coming behind. Success comes to the worthy.



Threshing Time is Coming

WHEN daylight finds the work well under way and the separator humming steadily—when the long summer days are not half long enough to finish all there is to do and every moment's delay is counted in actual dollars lost—

Then the unfailing dependability of Sawyer Belting, which for over thirty years has been giving service to power farmers and threshermen, is really appreciated.

Before the threshing season begins, insure yourself against costly belt delays by including Sawyer Stitched Canvas Belts in your equipment.

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over 30 Years*

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The American Thresherman and Farm Power

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A PAGE WITH THE EDITOR

SINCE Congress has passed a law providing for federal inspection of hay, there has been much criticism by many of the men who grow, use and ship hay. Some men claim that, under the present standards or grades, hay that has been considered Number One timothy by the grower and shipper is often graded Number Three timothy. This difference in grading is due to the presence of weeds, for which no allowance is made in the timothy grades.

Every thresherman knows that no bale of hay is without some weeds. However, these weeds can be kept at a minimum. Threshermen are fully qualified to pass judgment on weedy hay, and to advise customers not to buy seed of a farmer who has taken no pains to keep down the percentage of weeds.

Possibly this hay law needs attention. If our readers think so, we'd be glad to get their views. But surely every farmer and every thresherman owes it to himself and his community to make sure that one careless individual doesn't lower the hay standards of a whole township. Preach the gospel of clean fields and honest seed.

UNLESS a man is in touch with custom threshing these days, he is apt to put too limited a meaning on the term "custom thresherman."

Thousands of our readers, who go by the good old name of threshermen, are really custom plowers, road-builders, sawmill men and balers and hullers of hay.

In this issue we have tried to collect some of the best haying advice in the country. The custom man, these days, ought to know more about hay than any of his farmer neighbors. His customers will have a higher respect for his baling and hulling ability if at the same time he knows what soils are best adapted to clovers, alfalfa, soybeans, and so on.

The threshermen must be preachers of the gospel of a clean field, a high yield per acre, the replenishing of the soil's fertility. We have tried, in this issue, to remind the threshermen of things that many of them know already. Above all, don't forget that high yields and fertile soils mean lots of threshing and big profits for everyone.

The editors have been given special

help by the capable, conscientious men who are serving the farmers at Wisconsin's College of Agriculture; and we feel sure that the agricultural college men of every other state will assist the threshermen of their states in every possible fashion.

"IN all things whatsoever ye would that men should do to you, do ye even so to them," applies to every walk of life, including the threshermen.

WHEN men shall revile you and persecute you, don't forget that the most clubs are always found under the best apple trees.

It's no job for a boy, running a threshermen's convention successfully. Most anybody can muss over things, but keeping up interest and conducting the deliberations in a business-like manner requires a real presiding officer.

THE thing for threshermen to do is to look after their representatives in the various states who may feel inclined, possibly through ignorance of the facts and conditions, to pass adverse legislation concerning the use of tractors and traction engines on the highways. Instead of price cutting, suppose we do a little "club cutting" for the benefit of these.

TIMES have changed since the editor was a boy. Then, haying was one of the back-breaking jobs on the farm. We didn't have all the hay-loaders, hay-forks and pulleys that you see on most farms these days. You couldn't start your hay-tedder jumping up and down, tossing the hay around, but you did that with a pitchfork. And instead of having an improved hay loader to hitch behind your wagon, you fastened one end of a "grape-vine" to a trace of the harness and had a boy mount the old flea-bitten mare and gallop to the hay-doodles, circling one, while the man in the field gave it the finishing "tuck," hooked the other end of the grape-vine to the other trace, and then away you went with the shock intact to the stacking yard or barn. This was fun for the boys, but hard on the

horses, crowding them all day, and equally as hard on the two pitchers who had to boost these hay shocks at two or three forkfuls each on the stack or in the mow.

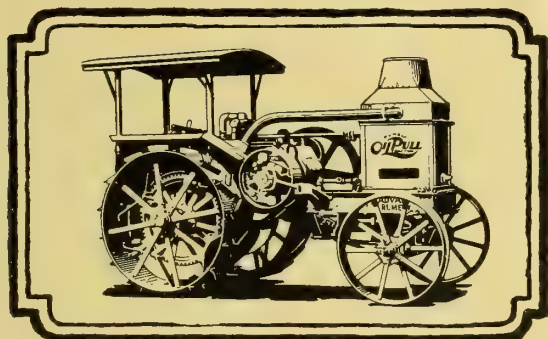
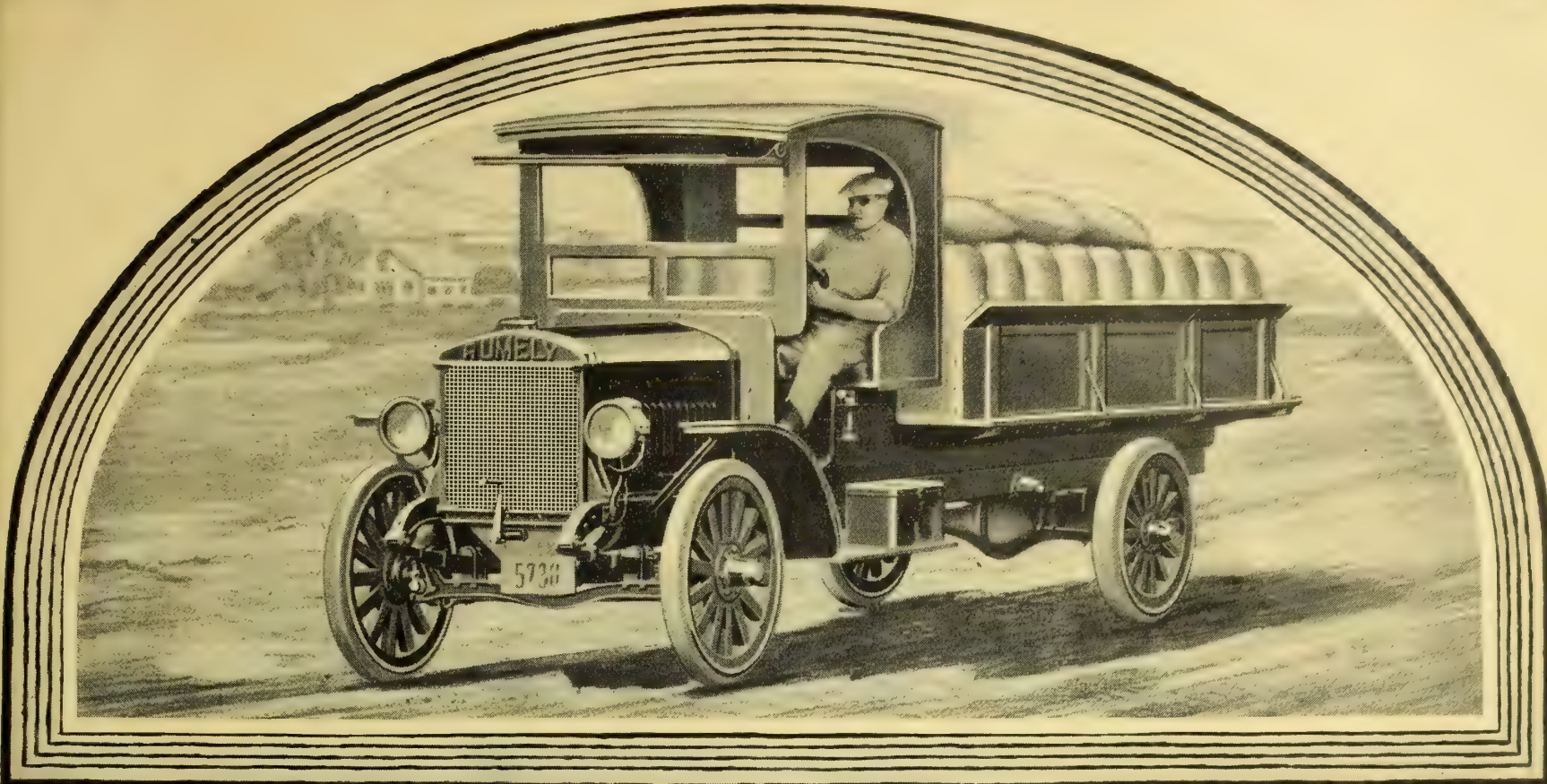
In those old days, fifty or sixty years ago, we dropped corn by hand, and covered the hills with a "skip-jack," a square-shovel attached to the single-shovel plow, and which we lifted up at every hill. We thought then that we had the very acme of improvements, when we were fortunate enough to have a one-horse planter with its thumb-trigger to "Click! Click!" at every cross furrow. Later this was supplanted by the two-horse planter, now as perfect as any other farm implement, and with which the artist farmer can plant his corn in as straight rows as can be made in any other manner, and permitting the corn to be plowed crossways as well as in the furrows made by the planter.

"DOC" HEDGES, Centerview, Missouri, sends us a clipping from a Missouri daily paper. In this clipping appears the statement that Governor Hyde has approved a house bill which "requires owners of steam threshing machines and tractors to give bond to cover damages to bridges over the highways caused by their vehicles."

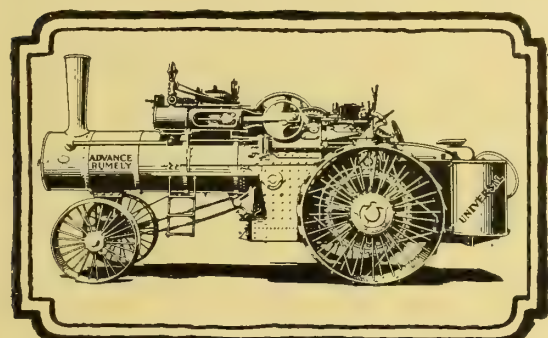
Brother Hedges is rightly indignant about this law. There is no more reason in the owners of threshing rigs giving bond for possible damage that may be caused to the "bridges over the highways" (that clause mystifies us) than in having every owner of a rapidly-moving automobile furnish a bond. The writer has on several occasions helped to replace bridge flooring that has been rolled up by speed demons—and the damage had been done simply because a man's tastes ran to unnecessary speed.

There is no need or justice in this constant levelling of legislative guns at the threshermen. The threshermen seem to furnish "straw men" at which half-baked legislators can heave rocks without risk to themselves.

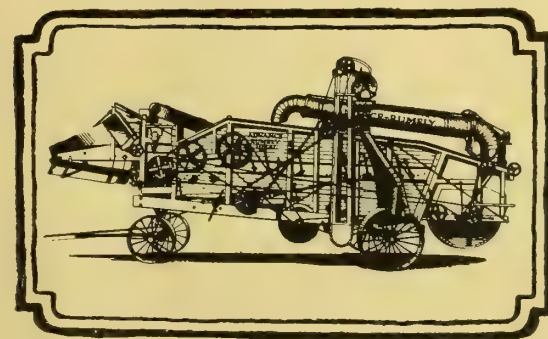
The voters of the state—in this case, Missouri—have the real influence. We hope every thresherman in Missouri writes his governor and his county representative about this matter.



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The Ideal Thresher, for generations, has maintained its leadership for big capacity, thorough, fast, clean work, ease of operation, freedom from repairs and long life. There are now five sizes—22 x 36, 28 x 44, 28 x 48, 32 x 52, and 36 x 60. Ask for Ideal literature.

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Purchasers of Rumely Farm Trucks get far more than merely an unusually good truck.

They get more than high grade mechanical design.

They even get more than the knowledge that into the Rumely Truck is built the same high degree of over-strength, reserve power, long life and super-quality that for over eighty years has distinguished all Advance-Rumely power farming machinery.

With all this they secure a permanent and thoroughly efficient truck service—a brand of service that multiplies the truck's value and utility.

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And that branch house is a permanent institution. One that you can rely on to be there in the years to come and just as willing to render efficient service in ten years or more as it is today.

That's why we emphasize the fact that when you buy a Rumely Truck you get a permanent truck service which is immeasurably more than merely a good truck.

—and if you are interested in mechanical details:

Capacity—3,000 lbs.

Motor—Heavy duty truck type; 4 cylinders cast en bloc; 3 $\frac{3}{4}$ in. bore; 5 $\frac{1}{4}$ in. stroke; S. A. E. rating 22 $\frac{1}{2}$ H. P. Valves on right side entirely enclosed; removable head.

Ignition—High tension magneto with automatic impulse starter.

Governor—Speed of engine automatically controlled by centrifugal type governor.

Lubrication—Force feed to all crank shaft, cam shaft and main connecting rod bearings. High pressure lubrication system for delivering grease to universal joints, spring shackles, and other chassis bearings.

Cooling—Water circulated by centrifugal pump through large cylinder jackets.

Drive—Triple universal joint, assembly equipped with an intermediate self-aligning bearing to prevent whipping of drive shaft. Semi-floating, worm-drive rear axle.

Clutch—Dry plate, multiple disc type.

Springs—Semi-elliptic on front and rear, Vanadium steel used throughout; front 2 $\frac{1}{4}$ x 40 inches, 9 leaves; rear, 3 x 54 inches, 11 leaves; Hotchkiss drive.

Tires—Regular equipment, solid tires, front 36 x 3 $\frac{1}{2}$ inches; rear, 36 x 5 inches.

Loading Space—10 feet, 2 inches from driver's seat to end of frame.

Frame—Pressed steel. Vertical section, 5 $\frac{3}{8}$ inches deep; width of flange in front, 2 inches; maximum width, 3 $\frac{1}{2}$ inches, tapered to 2 $\frac{1}{4}$ inches in rear.

Finish—Painted and varnished attractively in standard Rumely red, green and black.

Standard Equipment—Seat, seat cushion, front fenders supported by heavy brackets; jack, set of tools, tool box, hand signal, gas lamps and gas tank.

The Advance-Rumely line, which includes OilPull tractors, Ideal threshers, Universal steamers and the Rumely truck, is described in detail in our new catalog. Secure a copy from your dealer or from us.

ADVANCE-RUMELY THRESHER COMPANY, Inc., LaPorte, Indiana
29 Branch Offices and Warehouses

ADVANCE-RUMELY

THERE is one man who attends most of the conventions, and he is no respecter of persons. He is the overzealous demonstrator who reaches the climax of his speech just as invocation is being said. It's hard enough to get one's mind on prayer without being attacked in the rear by unnecessary clamor.

Kansas and Oklahoma associations need feel no jealousy of the new organization which met at Wichita about March 1. Michigan and Ohio have found the Toledo Bi-State convention a positive asset for their state organizations. We can use some more associations. There are plenty of threshermen left.

Brother J. G. Rush, Rockville, Indiana, is a real brotherhood "fan." He worked so busily at the "gates" at Indianapolis that he decided to attend the Illinois convention at Peoria, where he could enjoy the program in full. Mr. Rush is a plain, every-day thresherman, and Illinois men were glad this Indiana friend could attend their convention.

W. H. Newsom is well known as a leader in thresher organizations, but not many men know that he has run his own rig every autumn since 1892. Big Bill was born and reared on the farm where he now lives.

H. F. Humbert, a big, quiet-spoken thresherman of East Lynn, Illinois, says he is not worried as much by price-cutting as he is by road laws. Since the law, barring from hard-surfaced roads any vehicles having more than eight-foot beam, went into force, the only way Brother Humbert can leave his farm with his rig, *according to law*, is to load it on a Lake Erie flat car. The railroad passes just back of his farm.

The Indiana Liberty Mutual (compensation insurance) now writes insurance in Nebraska, Iowa, Illinois, Kentucky and Indiana. It expects to be writing insurance in New York within thirty days. Over five hundred claims for losses have been paid by it, and it is saving \$150,000 annually (over "old-line" company rates) for the threshermen of this country.

Organization

J. B. Parker picks up lots of extra brotherhood memberships for the state organizations which he visits. It is safe to say no state officer is more active than Brother Parker, in persuading new threshermen to join. And J. B. joins all the brotherhoods himself, too. You can't argue with a man like that.

Several men who attempt to make most of the conventions think the eastern states, such as Maryland, Delaware and New Jersey, should

state. Dates could be arranged so that the national officers could attend all conventions from Richmond to Chatham, Ontario.

Be sure you are fixing custom rates that will enable you to make a fair profit, in 1921; but also remember that corn, which sold for one dollar and seventy-five cents in June, 1921, (in central Iowa) has since sold as low as forty cents. This corn has been fed to hogs which dropped from twenty-two cents to nine cents.

bill through the Wisconsin legislature, it will be over the staunch Senator's prostrate body. And Brother Staudenmayer is a husky man, too. He will not go down without a struggle.

New Mexico could just as well hold a convention the same week as the Virginia organization meets. Brothers, there are big possibilities ahead of us. With everybody etc (including the farmers) organized so the hilt, we've got to stand together.

It pays to take the farmer's acknowledgment of a threshing bill. One Ohio thresherman told us of taking a note for ninety cents. The



The Michigan Legislators Could Look Out of the Windows of the State Capitol at Lansing and See These Boys on the Steps.

meet early in the winter, while Minnesota and North Dakota might improve the attendance by holding conventions in March, just before or after the Iowa and South Dakota "pow-wows." Attendance figures in the two states last mentioned furnish proof of this contention.

Ohio has one of the most popular brothers in the field of threshing: J. D. Landis, a light-haired hustler who makes friends wherever he goes. He added ginger to the Ontario, Michigan, Wisconsin and Illinois conventions.

If Virginia perfects an organization, as many Virginians hope she will, she would make a good lead-off

The farmer has a right to ask why threshing rates have not come down. If you can't reduce rates, you must be prepared to show why.

In 1921, it seems unbelievable that the implement dealers and manufacturers were once opposed to organization. Now they recognize that these conventions are better than any state fairs, for the purpose of presenting their products. Only the cream is to be found at conventions.

Senator George Staudenmayer continues to keep his average one hundred per cent in battling for threshermen's interests. If the adverse interests slip any obnoxious

signee was notoriously "slow pay." The banker laughed about this little note; but five years later the thresherman got one dollar and fifty cents, principal and interest.

Promises to pay should be left at your bank, not for discount, but for this reason:—your customers will know they can pay when it is convenient. Weeks of valuable time are lost in visiting customers who "aren't quite ready to pay."

J. B. Bartholomew, president of the Avery Company, Peoria, Illinois, knows how to talk to threshermen—but he ought to talk louder. The front ranks could laugh at his witticisms, but the back rows just



A Picture of the Illinois Convention at Noon of the Second Day. Fifty More Threshermen Arrived within Thirty Minutes After the Picture Was Taken.

Lay Your Plans Now!

IT'S discouraging to check up at the end of the year and find that because of some deficiency somewhere your work has not yielded the right profit.

You want to better yourself, for unless you can do that, what's the use of continuing the work and keeping up the investment? You want to increase the usefulness of your traction engine—do more kinds of work with it—thresh more bushels of grain—and at the same time you want to keep your fuel expenses down to the very lowest notch.

Your first step should be to completely rid your boiler of scale. It is a fact that the presence of this hard, crust-like formation is very detrimental to engine efficiency. Invariably it means a waste of fuel, of power, of time.

Lay your plans for the season now. Take the good old U. S. G. Co.'s Mexican Boiler Graphite with you when you start out. Use it as per our directions. And we'll guarantee that you won't be bothered with scale this year. It differs from other remedies in that it doesn't injure the boiler.

You'll soon observe that your engine works better, that you get more out of your fuel. This combination will put your business on a paying basis.

Send us this advertisement with your name and address and we will mail you booklet and other valuable information.

The United States Graphite Company, Saginaw, Mich.

BRANCH OFFICES:

New York Philadelphia Pittsburgh Minneapolis Chicago St. Louis Denver San Francisco
LARGEST MINERS OF GRAPHITE ON THIS CONTINENT

**MEXICAN
BOILER
GRAPHITE**



Save Money and Unnecessary Labor

By Using

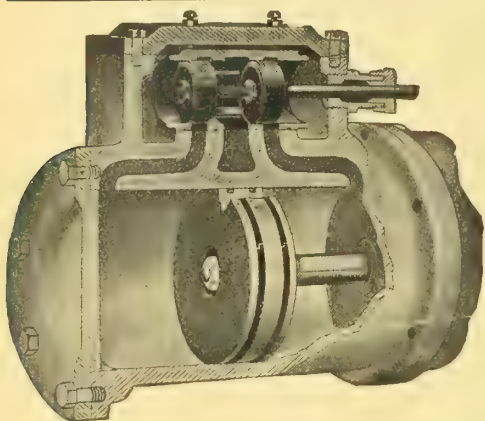
"PALMETTO"
TRADE MARK
REG. U. S. PAT. OFFICE

Its materials are heat resisting and each separate strand carries its own lubricant.

IN TWO FORMS

Let us send free working samples to prove it will outlast other packings.

Braided for
Rods
**Greene,
Tweed
& Co.**

 Sole Manufacturers
 109 Duane St.
 New York
Twist
for
Small
Valves

Ask about our accurate cylinder rebor-ing and new pistons.

Baker Valve Company

1855 E. 28th St. Minneapolis, Minn.

Steam Costs Money

That's why you should replace your wasteful slide valve with the Baker balanced steam tight valve. Then you'll save money because you'll save steam. Write for our descriptive folder or send first payment of \$10.00 to hold the low April price.



Increase power of cylinders by
using Vapor Tight Rings

laughed to keep company. The heavy-set president of the "yellow" line was reared on a farm, and he owns one now. Red hogs are one of his hobbies.

Bartholomew's description of the typical thresherman, as he found this somewhat hypothetical personage, was amusing. J. B. Bartholomew said no one was more versatile than the thresherman; he can do or mend anything. And he is a good manager of men and a good financier. About the last characteristic, we wonder. Do you think the *typical* thresherman is a good financier?

At the Illinois convention we overheard a conversation of this sort:

"Brother, do you keep a settlement book?"

"No, I just let my customers settle when they get ready."

"Don't you have them sign for the amount of work you've done?"

"No, I just write down the man's name and the amount."

"Haven't you ever had an argument about what the amount should be?"

"Yes, several times. But we always agree some way about it."

"Well, it seems to me you'd have to wait a good while for some of the farmers to settle."

"Oh, I wait as long as six months, sometimes, but in the end they usually fix it up."

"Don't you think you'd do well to get their names to the exact amount, in bushels and dollars?"

"Oh, no, I guess they're all honest."

Would you call that thresherman a good financier?

Little complaint about prices was made at the Iowa and South Dakota conventions. Several Iowa men expressed privately the fear that three cents a bushel for threshing oats was too much, if oats were selling at thirty cents a bushel. Once again we pause to remark, that custom prices for oats must be based on what it costs the threshermen to do the work.

Brothers, lots of us are still in the first grade when it comes to figuring the cost of threshing. Some of us are in the kindergarten period, in the matter of "selling" the true cost of threshing to the farmers who talk about threshing oats at a cost of two cents a bushel.

One thresherman, who has had trouble in collecting and as a consequence has often had to borrow at the bank, suggests that every customer should be asked to sign an acknowledgment of the work done. He would have this acknowledgment read:—"This is a true statement of

the work done for me and I agree to pay, at six per cent after thirty days from date." Such a receipt could be borrowed on, at the country banks, and the accruing interest would offset the interest which the threshermen must pay the bank on the money they borrow.

The South Dakota convention closed on March 17 and on March 20 the report was in the hands of the organization editor. That's fast work.

Several Virginians want an organization of threshermen in their state. J. G. Shank, Mount Crawford, Virginia, writes that threshermen have won three cases in trials before justices in his county, during the last week in February; but he adds, "We must be organized to defend ourselves against the laws forbidding tractors with cleats on state roads."

A machinery man who has visited most of the 1921 conventions said that the Ohio threshermen were more willing to do business than those of any other state he had visited.

Joseph Cushman, president, sent a neat-looking circular letter to Ontario threshermen on February 15. This letter recalled outstanding events of the January convention. The Canadian brothers surely know how to use good printing as an aid to organization work.

The County brotherhood of Vermilion county, Illinois, has eighty members. If the reports of Vermilion county which we have received, through newspaper clippings and letters, are half true (and it seems they are correct), the combined efforts of these eighty tried and true men will be needed to stem the "automobile" sentiment in this county.

The Iowa souvenir program is a neat affair with a heavy bond cover. The standard of printed programs for the threshing meetings is rising steadily. But the program itself must make every effort to keep pace with the fine printed announcements.

J. B. Parker visited us on March 18. He wants the brothers to remember that this year, more than ever, the owner of an outfit should figure his time is worth twice that of any employee on his payroll.

It gives the oldtimers pleasure to see how the machinery men co-operate with the threshermen to make the conventions a success. However, the primary object of these conventions is to spread useful information to threshermen and to discuss legislation, prices and mutual



Threshermen! This Is Your Company

The Officers and Directors are all threshermen or very closely connected with the threshing industry.

You will make no mistake by taking your Compensation Insurance in the Indiana Liberty Mutual Insurance Company.

It has returned dividends to its policy holders amounting to more than 10% of their premiums.

It has made provisions to protect its policy holders against catastrophe.

It pays its claims in full in accordance with the Workmen's Compensation Laws and Industrial Commission Rulings.

Now operating in Indiana, Illinois, Kentucky, Nebraska and Iowa.

Write for rates and information.

Indiana Liberty Mutual Insurance Co.
 626 Occidental Building
 Indianapolis Indiana

The Liberty Underwriters will write your Fire, Windstorm, Automobile, Accident and Health, Public Liability or any other Insurance you may want. Don't Forget the Address

Liberty Underwriters 625 Occidental Bldg. Indianapolis, Ind.

insurance. This primary object cannot be made secondary to sales tours.

The South Dakota boys got the press notices. The Sioux Falls papers were sprinkled with news notes of the March convention.

Brother J. H. Eaton, Bucyrus, Ohio, acted as host to the Crawford County Brotherhood of Threshermen on March 31. Mr. Eaton has just held a regular machinery exposition in his big Bucyrus shop and sales-rooms. At his special sale, he has featured a school of "Back to Old Prices for Machinery." Secretary Durbin and others of the Ohio brotherhood attended the sale and county convention.

Word came on April 2, that the Maryland Brotherhood of Threshermen will hold their Annual Convention, April 8-9, at No. 129 S. Gay street, Baltimore, Maryland.

If Wyoming organizes a brotherhood in June, they will deprive New Mexico of the honor of being the first state to carry organization west of the great wheat belt. However, there is plenty of room for two—Colorado and Montana should be next.

C. J. Farney, manager of the Fargo, North Dakota, branch of the Advance-Rumely Company, writes that his force is proud of their new three-story building. This building is one hundred feet wide and two hundred feet in length, and has a capacity of seventy-five separators and one hundred tractors. It should be an attraction at convention season for the North Dakota brothers.

Reports of conventions have been slow to arrive during March. We've done the best we can with personal impressions and secondhand information, but the secretaries are the only authorized reporters.

Nebraska brothers will be glad to know that J. J. Senn, an old Reeves "steam man," and Charles Zink, who has long traveled in Nebraska as a service man, have formed a partnership and will handle E-B threshers and implements at Lincoln.

E. F. Hall, Basin, Wyoming, wrote us a letter that reached us just before the April issue went to press. He writes that preliminary organization meeting for Wyoming threshermen will be held in Basin on June 24, 1921. Mr. Hall hopes to have Big Bill Newsom on hand to tell the Wyoming boys how the Indiana threshermen managed to convince four thousand members that "united we stand—divided we catch h—."

While most of the men at this June meeting will likely be Big Horn County men, Brother Hall hopes that many counties will be represented.

The Ohio threshermen should realize that House Bill No. 346, is a scorcher if it becomes a law. This bill has been trotting around in the State House for some time, and finally was handed to the chairman of the Judiciary Committee for them to recommend it out, and then the bill should be printed and take its regular course; but we were on the job every moment and succeeded in getting a copy of the bill before even the members of the general assembly, outside of the chairman of the Judiciary committee, knew of such a bill. After explaining to the members of this committee the hardship it would add to the threshermen and farmers, they killed it.

You understand this bill did not have any number or any title. That is the reason why no one knew anything about this bill. They tried to pull one over, but we were in the game at the time, and "clubs was trumps" and we had 'em, but now the author of the bill has had representative Edward H. Boyland, an attorney of Akron, Ohio, introduce this bill by request. It now is No. 346, according to the House Journal, and the bill will be out in a few days, and we hope that "clubs will be trumps" again, as we hold a full hand, we will be at this lawyer's heels at every jump.

I am going to mention a few of the provisions in the bill that will affect the threshermen, because if I undertook to mention all of them it would take nearly a week. The bill covers thirty-two pages and contains about seven thousand words.

Section 6302.—Boy under eighteen years of age cannot get an operator's license.

A steam engineer cannot get operator's license unless he has driven a traction engine five hundred miles.

Section 6304.—Or must obtain a pupil's permit. Pupil must be accompanied by a licensed operator for thirty days.

Section 6310.—Must have two white lights in front and red light in rear.

Section 7248.—Engine cannot be wider than one hundred and eight inches, or higher than twelve feet and six inches, or longer than thirty feet.

Section 4278.—No steel tire, of three inches or less, is allowed to carry over five hundred pounds.

Section 12605.—Traction engines and tractors must have smooth wheels, otherwise he pays damages done to the highways.

For violating the above provisions you are liable for damages of \$1000.

There is only one thing that we are afraid of now, and that is the senators and representatives are making inquiry as to the size of our membership. These are some of the questions that they ask us, "does Bill Brown or Frank Jones up in my county belong to your organization?" Now, if Brown or Jones does not happen to belong to the Ohio Brotherhood of Threshermen, the senator

"The Belt of Service"



Fit for the Farm

PUT it down indelibly that for every-day work on the farm stitched canvas belting is most reliable and economical.

This is subscribed to by every farmer who has given serious thought to his belt purchases. Tests and comparisons have established it as a fact time and again.

The next thing is to pick the best out of the lot of canvas belts. Many have chosen Hettrick. And it is significant that they continue right along as Hettrick users and boosters. They're satisfied.

The time's about here to look for belt replacements. The crop is growing and the busy season not very far off. Make Hettrick Stitched Canvas Belts your choice and you'll be certain of a belt that fits your work.

Hettrick Manufacturing Company
Toledo, Ohio

Hettrick Canvas Belts



Allied Belting

YOUR business demands a belt that you can depend upon always. There's no place for an uncertainty on the farm.

Any belt will transmit power—for a while. But it's the long run that tells the story. The cheaply constructed product is soon stripped and its make-up exposed.

Allied Canvas Belts have qualified as dependable through their wide usage among farmers. We recommend them to you as a good buy.

All lengths, all widths, any ply, for every power machine. Write us about your belting needs. We're at your service.

The Allied Belting Company
Greenville, Ohio

or representative will say, "Well, they must be in favor of this bill or they would have representation here, so I can not figure it out any other way. Should this bill No. 346 become a law, the thresherman who is not a member of the Ohio Brotherhood of Threshermen is in favor of the bill."

We are trying to form a county organization in every county in the state. We have Thomas Harker, who is a fine gentleman and who knows the thresherman's needs, for our county organizer. He will assist any local organization that wishes help. Just write us and give us the date and place.

Please do not forget the district meetings which will be held in May and June.

May 24, Minster.

May 25, Dayton.

May 26, Washington C. H.

May 27, Chillicothe.

May 28, Lancaster.

May 31, Marion.

June 1, Mansfield.

June 2, Massillon.

If any changes are made notice will be given in the May issue.

GEO. DURBAN,

Secretary and Treasurer.

The annual convention of the South Dakota Brotherhood of Threshermen was held March 15, 16 and 17, and was decidedly the best convention that has ever been held in South Dakota.

There was a good attendance and an exceptional display of accessories and new improvements for threshermen.

The second day of the meeting was the regular business session of the Brotherhood and many things were discussed for the promotion of the interests of this thresher organization. In the evening of the second day a free entertainment was given to all threshermen, members of their families, and their friends. This entertainment consisted of five acts of vaudeville and several reels of moving pictures and was declared by many to be a better show than had been shown in this city for some time.

The meetings of the South Dakota Threshermen's Protective Association and the Threshermen's Mutual Fire Insurance Company were held during this convention. The reports made at these meetings showed a very satisfactory growth and proved the benefits of thresher organization.

We were more than sorry that Uncle Silas was unable to be with us at this time but are looking forward to our next year's convention and hope he can be with us then. I am furnishing a detailed report of the convention.

MARCH 15, 1921.

Afternoon Session.

Meeting called to order by the president, H. F. Borneman, at 2:00 o'clock with a few opening remarks.

Address of Welcome by Judge R. W. Parlman, Mayor Burnside being unable

to attend. Mr. Parlman talked to some length on Financial Affairs as they affect the rural people.

Response by Mr. H. E. Grebe of the Emerson-Brantingham Company, who delivered a very able talk on "The Threshing Industry."

The different exhibitors and branch managers were then called upon and the following responded: Mr. Johnson of J. I. Case Threshing Machine Company; Mr. Rosenvold for Minneapolis Threshing Machine Company; Mr. Wallace of Link Manufacturing Company; Mr. Buller of Buller Coupler Company; Mr. Green of Baldwin & Green; Mr. Boyler of J. I. Case Threshing Machine Company.

J. B. Parker of Indianapolis was the next speaker called upon. He gave a very interesting talk on the "Business of Threshing" and on organization.

Upon motion, duly made and seconded, Mr. Parker was made a life member of the South Dakota Brotherhood of Threshermen and was presented with a gold button by the secretary.

The following committees were appointed: Nominating—John Schweisow, Grosse; A. O. Skogstad, Florence; R. R. Fredrickson, Bryant. Resolution—W. A. Swark, Sioux Falls; H. C. Wallace, Kansas City, Mo. Auditing—L. E. Darst, Sioux Falls; H. A. Rosenvold, Sioux Falls.

Evening Session.

Talks on instructive subjects by the following:

V. W. Hinterlong on "Thresher Business."

Mr. Gunderson on "Valves and Compression."

W. A. Swark on "Gas and Carburetors."

H. E. Grebe on "Separators."

Mr. Cruikshank on "Ignition."

MARCH 16, 1921.

Morning Session.

Called to order by H. F. Borneman, acting as chairman. This was regular business meeting of the brotherhood.

Minutes of last meeting read and approved.

Report of auditing committee was read.

Moved and seconded to adopt report and discharge committee. Motion carried.

Nominating committee submitted the following names: for president, H. F. Borneman; for vice president, G. M. Scott; for secretary-treasurer, W. A. Swark; for member on legislative committee, H. F. Borneman.

Mr. Parker took the chair and it was voted to close the nomination.

Moved and seconded that the names so presented be accepted and those so nominated be declared elected. Motion carried.

Moved and seconded that the members of the nominating committee be elected to act as executive board. The following were elected: John Schweisow, A. O. Skogstad, R. R. Fredrickson.

Report of secretary on National Association work.

Response by J. B. Parker.

The following members were appointed as delegates to national convention: H. F. Borneman, G. M. Scott, W. A. Swark.

Alternate, Fred Wuerfel.

A representative of the Department of Markets, Hugh N. Allen, was called upon to talk on "Registration with the County Auditor."

The next speaker called upon was E. W. Werner of the Goodyear Rubber Company, who spoke on the construction and application of belts.

Meeting adjourned till after lunch.

Afternoon Session.

Called to order by the President.

The first speaker was former Industrial Commissioner Chas. McCaffree. His talk was about building up a community and about the proposed St. Lawrence river project.

The meeting proceeded to the business of the Protective Association.

At the close of this meeting was an auction sale of accessories donated by the exhibitors.

Meeting adjourned until forenoon of following day.

During the evening a free entertainment was given to all present. It consisted of five good vaudeville acts and several reels of pictures.

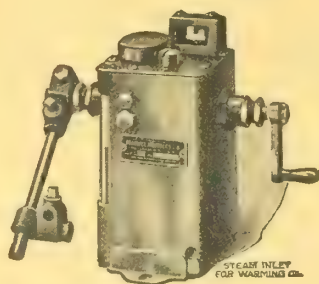
MARCH 17, 1921.

Morning Session.

Meeting called to order by the president. The accessory men who were absent on the first day were now called upon:

(Continued on page 52.)

No More Trouble Oiling Your Engine



After you install a Manzel Oil Pump on your engine you can forget all about oiling your engine. The Manzel will take care of the lubrication. It will force the oil into the cylinder regularly, and in just the right quantity. It will need no attention—it will never forget

The "Manzel" Sight Feed Oil Pump

Piston Valve Type—Model "XD"

Will give your engine positive lubrication whether plowing, threshing, or on the road. It's made to work right, in winter as well as in summer; to pump against any pressure; to feed just the right amount of oil and to feed it regularly. You'll have no more trouble oiling your engine cylinders if you equip with a Manzel Pump.

Let Us Send You One on 30 Days' Trial

Try it on your engine and see for yourself just what it will do. If you don't find it satisfactory, after 30 days' use, return it at our expense.

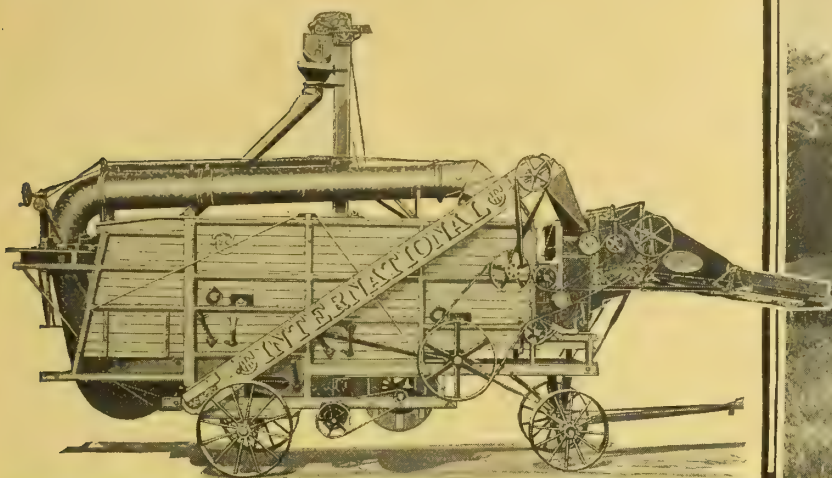
Ask for catalog "XD517"

MANZEL BROTHERS COMPANY

311-313 Babcock Street

Buffalo, N. Y.

The International Harvester Company is the latest manufacturer to adopt Rockwood, *The Drive Pulley*, as standard-equipment on their threshing machine. Right—view of an International separator in action. Below—the new International.



Don't Buy A Threshing Machine Unless It Is Rockwood-Equipped

THRESHING! It's the hardest test a drive pulley gets—to deliver power that will run a separator *continuously* at *uniform speed*, and to full capacity when the straw is heavy and wet!

Because of this hard, grueling work it once was necessary for manufacturers of threshing machines to 'lag' or 'cover' the faces of their pulleys to insure the necessary belt power.

Then came Rockwood, *The Drive Pulley*—the better pulley which manufacturers now use. It is built up of solid hydraulically compressed fiber—delivers far more power than 'covered' or 'lagged' pulleys, and overcomes their great disadvantage of wear.

Rockwood, *The Drive Pulley*, is used *exclusively* on the following nationally-known, dependable separators:

Aultman & Taylor
Avery
Banting
Cape New Model

Frick
Gopher
Huber
International Harvester

Minneapolis
New Racine
Port Huron
Wood Bros.



ROCKWOOD *The DRIVE PULLEY*

ROCKWOOD, *The Drive Pulley*, consists of a solid block of tough, wear-resisting fiber (seldom less than two inches thick) built around and into a heavy cast iron hub. The end-grain is exposed as a surface to grip the belt surely and firmly—a surface made up of layer upon layer of fiber hydraulically compressed and cemented—a surface that renews itself automatically as it wears and wears and WEARS.

Rockwood, *The Drive Pulley* has no "cover" to strip. It is all pulley, and is thoroughly waterproofed.

Put Rockwood, *The Drive Pulley*, on your present threshing machine. Order through your nearest implement dealer or we will ship direct. Write for descriptive booklet, giving prices, sizes and complete information.

THE ROCKWOOD MANUFACTURING COMPANY
1926 English Avenue

Indianapolis, U. S. A.

All the Power—All the Time

ROCKWOOD, PULLEY SERVICE



The Caswell Adjustable Belt Guide

is the standard of America and is superseding every other make. It is adapted to all separators.

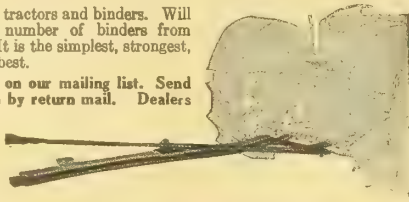
The Caswell Hinged Belt Reel swings the belt under the feeder out of the way and out of storms, protected from rain and rot.

The Caswell Automatic Binder Hitches

Adapted to all tractors and binders. Will draw any number of binders from one to five. It is the simplest, strongest, cheapest and best.

We want you on our mailing list. Send us your name by return mail. Dealers wanted.

Caswell Mfg. Company
120 Vine St. Cherokee, Ia.



Send for Threshermen's Specialty Catalog

It is chuck full of good things. Portable Elevators, Belt Guides for Rumely Oil-Pull, steam and separators. Engine Couplers, Binder and Separator Steering Poles, Beading Tools, Vacuum Non-Slip Pulleys, Stacker Hoods, Spark Arresters, Cylinder Wrenches and Cement and Canvas Lugging. If interested in concaves, send name of separator, width of cylinder and number of bars, and we will send prices for that size and make.

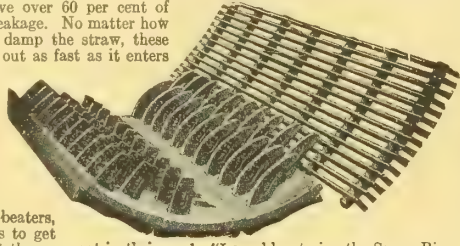
Kirby McRill, Tonganoxie, Kans., wrote recently: "The concaves I bought of you seven seasons ago are still there and the Straw Riser Concave will outlast the machine. When I bought the new 40" Rumely Ideal five years ago I set the new concaves aside and put in the Up-2-Date. I never had to give them a thought during the threshing season, just forget all about them. We have a great deal of river bottom land here which grows rye six feet long and sweet clover eight feet with branches on it like young trees. The cylinder never back lashes when the rye is damp."

Wm. Penn Jones Impl't Works, 1314 Washington Ave., So., Minneapolis, Minn.

Up-2-Date Concaves

Mr. Thresherman: You cannot accuse us of talking through our hat any more, as we have made up our mind to let your old experienced brother threshermen talk for us.

JOHN A. SCOTT, President of the Oklahoma Brotherhood of Threshermen, told his brother threshermen that the Up-2-Date Concaves will make any OLD RATTLETRAP of a separator do better work than when the machine was new. Two years ago he bought two new 36" Case machines and set the new concaves aside and put in the Up-2-Date. After two seasons of hard run they scarcely show any signs of wear; in fact the Straw Riser Concaves will outlast the life of the machines. They save over 60 per cent of cylinder teeth breakage. No matter how long, tangled or damp the straw, these concaves float it out as fast as it enters the machine, clear over the grates and the Man Behind the Gun, so that the cylinder is never known to back lash. This enables the I. X. L. beaters, forks and raddles to get hold of it so that they can get in their work. "I would not give the Straw Riser Concave for any \$200 grain saving device I have ever seen and I have seen them all. All you threshermen that use gas power should get them as they stop slugging and reduce the draft over 2 horse power. Gas engines cannot pick up lost motion like steam. After six weeks of rain in 1919 the straw piles we threshed were the only ones that were not green."



Frank P. Roberts, Bangor, Wis., wrote January 3, 1921:

"Send me your latest catalog. The concaves I bought of you seven years ago are still in my A. D. Baker 36" separator. Have threshed on an average of 35 days each season and during all that time I have had only one loose tooth and never broke one. The teeth are in good shape yet and the Straw Riser Concave will outlast the separator. This set has sold four other sets in this neighborhood."

Correspondence

I find there is lots of custom hay work that can be done in connection with the custom threshing business.

I have been in the hay pressing and threshing business for eight years. I have one of the best regulated outfits on the road or in the field. I am sending you a picture of

Several letters lately have been telling about the prices charged for threshing clover. I received one dollar and twenty-five cents a bushel for hulling sweet clover during 1920. This ought to encourage the man who thought one dollar was too much.



Rig of A. C. Krewson, Gaines, Michigan, Who Has Done Hay Pressing for Eight Years.

my outfit, which consists of a 20-horse power Russell engine and a 30x50 Russell separator. I think it the best machinery made. I have lots of power for my separator and I think that makes both ends last longer. I run my own engine all the time and have the blower man drive the Ford from job to job.

We had a forty thousand bushel run of grain last year in about seventy days, and four thousand bushels of beans. Beans furnish custom work for many threshermen.

I have a Greyhound beaner, and a Whitman hay press, which are both very good. The only trouble is that it is too far from a repair shop. My baling record in this section is thirty-five tons in ten hours and one hundred and fifty tons in five and one-half days.

A few farmers use the small rigs around here, but I do not think they will last long. If the companies would quit making them, it would be a lot better country.

A. C. KREWSON.

Gaines, Mich.

I own an 18-36 Avery tractor, a 23x36 Aultman-Taylor separator, a Climax ensilage cutter, and a Moline Universal tractor. With these machines I do all my farming, including corn cultivating, planting and general farm work. I do not use a team, which may seem queer to some people, but it is easy. Later on, I shall tell how it can be done.

I prefer a gas tractor for threshing, as I think it is handier and cheaper to run. My wife runs the tractor while I run the separator alone. I am enclosing a picture of our rig threshing sweet clover.

We had a good summer and fall run with wheat and oats, but had some trouble getting around during the winter threshing kafir corn. The steam engines were all laid up on account of mud. We ran about twenty-six hundred bushels of kafir. We get seven cents for oats, seven for kafir corn, twelve cents for wheat, and one dollar and twenty-five cents for sweet clover and alfalfa.

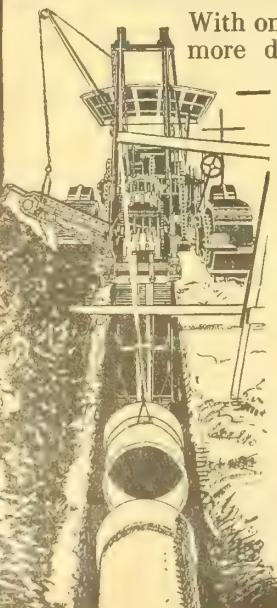
CHAS. E. PIERCE.

Atlanta, Kan.

Mason Made \$2500 Net In Five Months

Nice amount of money for five months' work, isn't it? You can do it as well as Mr. Mason and hundreds of others are doing. The demand for traction ditching is enormous. You can make big money with a

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher



With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send For Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for the book, you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.
198 Crystal Ave., Findlay, O.

READ THIS LETTER
Work has been so plentiful that I have turned away more than I have done. The machine has given entire satisfaction and far exceeded my expectations. I find it very easy to average 130 rods working ten hours. The machine has been in operation for five months and during that time I have done work amounting to \$4000 which netted me \$2500.
VICTOR MASON
Mt Pleasant, Iowa

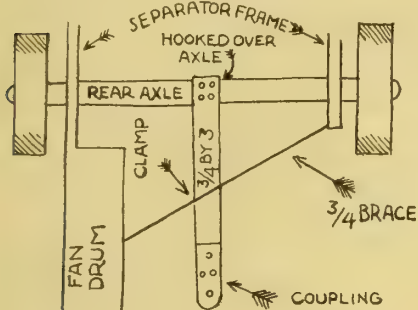
(1)



C. E. Pierce, Hulling Clover at Atlanta, Kansas. Mr. Pierce Got \$1.25 a Bushel for His Work. Note the Motorized Equipment, Oil Truck and Grain Truck.

Lately a man asked how to put a coupling on the rear of his machine, to haul his oil tank. I assume it is a twelve-barrel tank. A coupling can easily be put on, without having any side draft except on short curves. It would be impossible to get away from that, as there is side draft to anything on a circle.

Now the diagram I give here can be worked out on any make of machine. If the questioner had stated



R. F. Sigler's Device.

the name of his separator, I could have drawn a plan to fit it exactly.

The coupling that I give in this diagram is a flat bar of iron, three-fourths inch by three inches, which is sufficient to haul the load. On a straight haul, there will be no side draft, but on a curve there will be more or less side draft as you cannot get away from it.

R. FOREST SIGLER.

Cusick, Wash.

I have been a reader of The American Thresherman and Farm Power for two years, and would not be without it for four times its price. I only wish it would come every two weeks. I read it from cover to cover and enjoy very much reading letters from different farmers and threshermen.

I have run a separator for seven years; for five years, I worked for another man; but in the fall of 1919 I bought a Russell 24x42 separator. I had a 12-25 tractor that handled the separator very nicely when it was dry. This fall I got a new 20-35, so now I have plenty of power for all kinds of weather. I have always had good luck with gas power and like it better than steam. I never have had to send for an expert.

I am sending you a photo of the rig; it shows where I am plowing. I do a lot of custom plowing and get three dollars an acre for the work. I threshed only twenty-five days last

year. I then began plowing and could have been at it yet had not the ground become frozen.

As for threshing, I get five cents for oats, six cents for barley and ten cents for rye. We do not raise any wheat here.

I run the whole outfit myself and do not furnish any help, so everything is mine; still, I get all the threshing I want.

I keep my machine in good condition, and, when running, I keep eight bundle teams busy. During our best days we threshed 1,652 bushels of oats; on another full day, we threshed 2,640 bushels of oats. Although the rig is small, it can get the straw through and surely saves the grain. I like the Russell separator the best of any make I have used.

I have been reading in your magazine how Mr. Naessig had trouble in threshing clover last fall. I threshed clover and got eight dollars an hour with this small rig; so if I were Mr. Naessig, I should charge by the hour.

NIELS P. SORESENSEN.

Dell Rapids, S. D.

I note that a Missouri brother asks for a hitch to pull his oil tank behind his separator. I have attempted to sketch herewith a device that we have used for nine seasons to pull a water tank behind the steam rig. This device pulls the tank regularly, and often the coal wagon and maybe a grain wagon or two in addition. On one occasion it trailed seven bundle wagons. At other times it has pulled a heavy cook car with a tank behind that. In all this time the device has never made any trouble and has never injured the blower nor any other part of the machine. If I had fifty separators I would rig all of them the same way. We had old parts to make the hitch, but it would not cost much, even if everything had to be new. The pole is an old tongue, long enough to come out even with the rear frame, so that the tank tongue has no chance to run under the blower. It is about three by four in size, hardwood, and has an iron on the end, suitable for coupling. No doubt soft wood, a round pole, or even a good wagon reach would answer. The braces were from a splice tongue we discarded, and are about an inch



Niels Sorensen Gets Three Dollars an Hour for This Plowing. Clover Threshing Brings Him Eight Dollars an Hour.

Let your next tire be



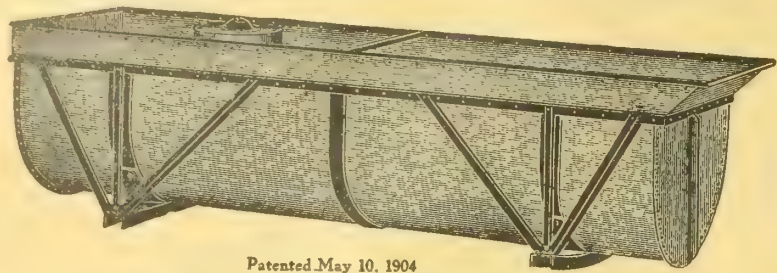
SIZE, Strength, Safety, Appearance and Economy are what you want in a tire—and that's what you get in the Fisk.

You can buy Fisk Tires with absolute confidence that you get exactly what you pay for in mileage, safety and quality.

Put Fisk Tires on your car or truck and watch the record. Keep track of their long mileage—uninterrupted mileage; the freedom from repair bills; and the sure, positive way they hold the road under all conditions.

Sold only by dealers

A Different Cut—But



Patented May 10, 1904

The Same Reliable Tank

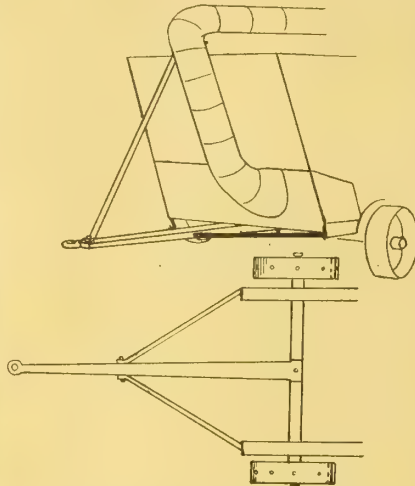
Last summer a customer brought back a tank for a new head—but he had used that tank for 17 seasons. Customer's name given on request. For like service, write

PIONEER MFG. COMPANY

MIDDLEBURY, IND.

Mention The American Thresherman and Farm Power

and a quarter. Perhaps three-fourths-inch or even five-eighths-inch iron would do. The manner of bolting the braces to the sills takes all the strain of pulling off the axle. The brace from above is quite a heavy piece of flat iron and is bolted to the upper blower frame. Braced in this way the hitch is rigid; as it does not swing, it cannot strike the blower or any other part.



A. W. Mahin's Arrangement.

The upper view shows the attachment to the rear axle, with a brace from the frame. The lower view shows the towing pole. Attach the pole and rods to the machine, then bolt the rods to the pole. The brace rods are attached to the separator sills.

It is well to couple the tank closely, with a small clevis, rather than with a chain or any device that allows any slack. Probably the manner of attaching to different machines may vary, but no doubt the principle will work on all.

A. W. MAHIN.

Heaton, N. D.

I am enclosing a check to renew my subscription to The American Thresherman and Farm Power for five years. I read your paper with interest from cover to cover, especially the Correspondence Department.

I have been in the threshing business for fourteen years and am still in the ring. I have a 20-horse power Northwest engine and a 36x56 Minneapolis separator. The jobs around here are not very big, but prices are good. I find it pays to keep my machine in good running order. It is not enough when a thresherman knows how to handle his machine to do good work, but he must also know how to handle a crew and every customer.

I am enclosing a photo of my separator at work. I threshed fifty-

three days last fall with this outfit, threshing about seventy-five thousand bushels of grain. I got six cents for oats and ten cents for wheat.

MANFRED ELSBERY.

Ronneby, Minn.

I own a J. I. Case threshing outfit, consisting of a 40-horse power steam engine and a 24x42 separator. This makes a good outfit for this part of the country. Last season I threshed thirty thousand bushels in thirty-six days, and the preceding year I threshed fifty-two days and threshed fifty-one thousand bushels.

I wish to renew my subscription for five years to The American Thresherman and Farm Power. I find it very helpful and cannot live without it.

JOS. L. ANDERLE.

Mosinee, Wis.

This is the first season for me to operate a machine of my own, although I have been in the game for some time, as operator, local dealer and salesman. The American Thresherman and Farm Power has been a great help to me in my work.

I own a 16-30 OilPull tractor and a 25x44 Ideal separator and consider them superior to anything in the field. I use the separator for threshing wheat.

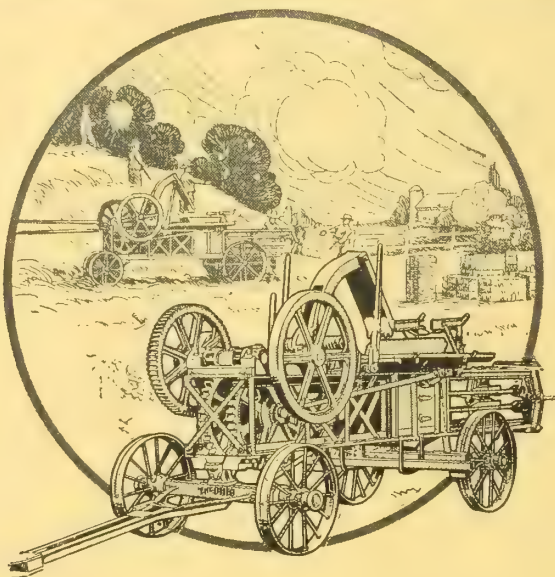
Threshing was unusually good in this section this year. We get six cents for oats and twelve cents for wheat. We furnish only the machine crew. We got thirty-five to eighty-two bushels of oats per acre, and from eight to twenty-seven bushels of wheat. The crops range from around sixty to two hundred acres; very seldom a pull is made more than one-half mile.

I think some of the older companies, not represented in this state, would be welcomed by machine operators. We are rapidly bringing Texas into the ring as a small grain producing state. What few we now have will soon be unable to take care of the increasing business. I should like to see a threshermen's organization in our state. My opinion is that a corporation is the success of any business.

Loving, Tex. CLAUD OLIVER.



The Elsbery Separator Threshed Seventy-Five Thousand Bushels Last Fall.



The Famous Ohio Hay Press Is a Real Profit-Maker

The thresherman who does not have a hay press is passing up one of his best money-making opportunities. The farmer has learned that it pays to bale his hay, because it brings a better price, takes up one-fifth as much space, is more easily fed, and can be more quickly and cheaply hauled to market. More hay will be baled this year than ever before.

The Famous Ohio baling press is built by a firm which has manufactured farm implements for forty years.

It will bale as much hay as a baling crew can properly feed it.

The relief clutch on the feeder is automatically released at a pressure of 750 pounds, in case of overload caused by overfeeding or an obstruction, thus preventing any damage to the machine.

We will be glad to mail you a catalog.

The Ohio Cultivator Company
Bellevue, Ohio, U. S. A.

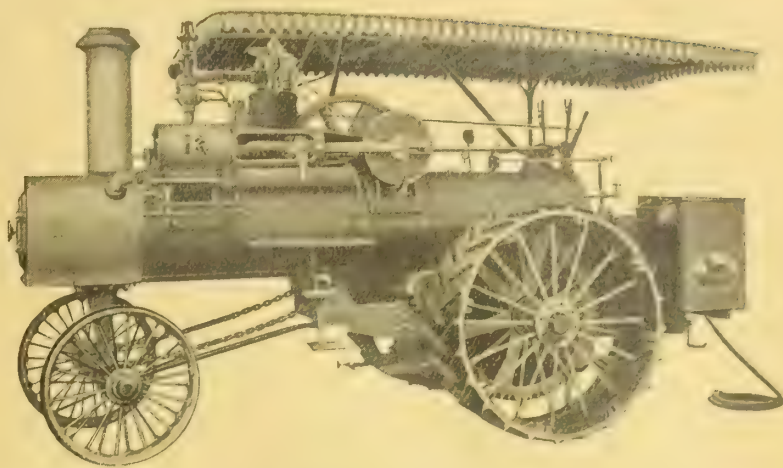
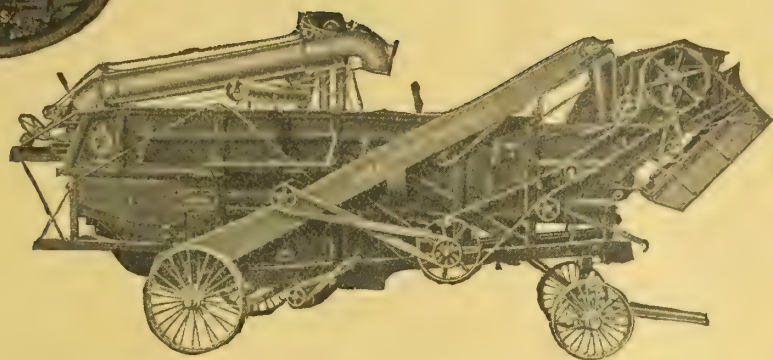
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Disk Harrows, Lever Harrows,
Corn and Cotton Planters,
Pulverizers, Clod Crushers,
Spreaders, Hay Presses,
One-Horse Cultivators,
Shovel Plows,
Garden Cultivators,
Steel Shapes, etc.

Ohio

FAMOUS

BALING PRESS



The "Blue Ribbon" Team for Threshermen

Pedigreed by 80 Years of Development

Russell Threshers

have the big easy-running 15-bar Cylinder that works tooth-and-nail with the High-finger Grate and gets most of the grain right there; and the patented Distributing Beater that spreads the straw evenly across the rack and gets out the very last kernels.

No other thresher has these features—and none other can equal the Russell for saving and cleaning **all the grain.**

Russell Steam Traction Engines

never had a real rival for smooth, steady flow of abundant power, regulated at just the right speed to get out most grain with least wear and tear on engine or thresher.

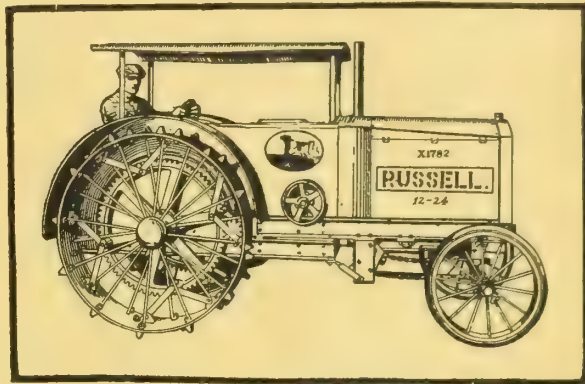
Send for the big New Russell Catalog

The Russell & Co. Massillon, Ohio

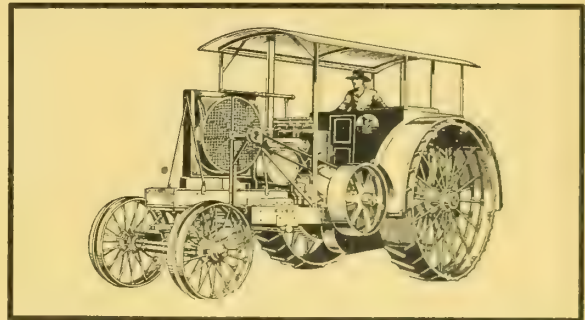
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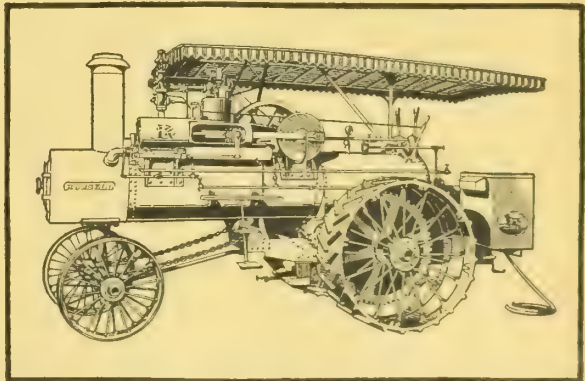
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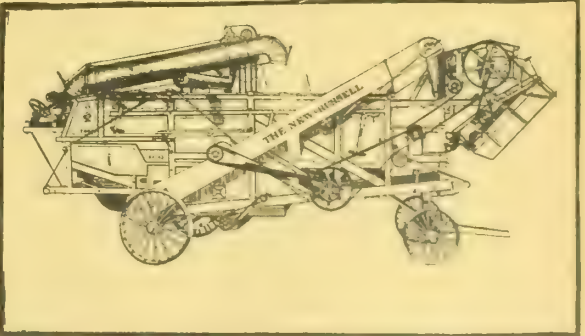
Russell Kerosene Tractors this type are made in three sizes, 12-24, 15-30 and 20-35



Russell Giant 30-60 H. P.



Russell Steam Traction Engines are made in 5 sizes



Russell Threshers are made in six sizes, from 20x34 to 36x60, all alike in design and exclusive features

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Be Known As The "Grain-Saver" In Your Territory

BE known in your neighborhood as the thresherman who leaves clean straw piles and clean grain—the "Man Who Saves the Farmer's Thresh Bill." Such a name is easily earned by running a

Red River Special

It beats out the grain instead of waiting for it to fall out. From the time the straw enters the machine until it leaves it—through the Big Cylinder, the famous "Man Behind the Gun" and over the **beating shakers**—it is subjected to violent **beating** and **shaking**. The grain **must** come out.

Make this year's run with a Red River Special, driven by a Nichols-Shepard Steam or Oil-Gas Engine. It will make you money and customers.

Write for Circulars

Nichols & Shepard Co.
Battle Creek, Michigan

In Continuous Business Since 1848

Builders Exclusively of Red River Special threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines.

The Life of Machinery

BY EDGAR L. VINCENT

A MAN I know of has had three or four mowing machines since his neighbors have had one. Remembering that this man had bought a new mower only a few years ago, I was surprised one day upon paying a visit to his place to see that it was already practically used up. He seemed to realize that this was true. The work he was doing was proof enough that the machine had seen its best days, and he made the remark, "I don't believe they put as good stuff into their mowers as they used to. This one has gone to pieces in no time. I have not used it so much more than I have other machines in the past, and just look at it! I shall have to get a new one."

After I had watched this man a little while I did not so much wonder that the mower had been short-lived. As Uncle Thomas used to say, "His breath was bad for machinery." You have seen such men. They do not seem to think that the very life of any machine depends upon the care which is given it. Every farm machine has certain things about it that can be seen and felt and appreciated through the senses. The makers of these machines know this and they put the very best work they can into their construction, so that they shall appeal to the eye and the sense of beauty. Of course, no amount of paint can make a machine wear if it is misused nor warrant the belief that it will do perfect work. Stripes of red or white or blue add little to these working qualities. They do make it beautiful, however, and attract us to it.

There is something more than this about a fine machine, however. Back of the fine workmanship and the artistic painting there is a subtle something which cannot be seen, something that makes the machine almost a living thing; and this is its ability to endure, to do the work expected of it, to meet every demand that can reasonably be made upon it, and this invisible, incomprehensible thing I like to call its life. I never stand and look at one of these splendid pieces of workmanship that I do not feel like taking off my hat to the men who made it; but more than all do I admire the mysterious power that lies down out of sight, waiting to do the bidding of the man who uses it.

And because all our machinery has this endowment of life, it is well worth while that we should do our best to prolong its existence and usefulness as long as possible. The man who will deliberately abuse a good farm machine cannot be trusted always to be good and kind to his stock, or even the members of his

own family. It may be some will think this is putting it pretty strong, but I believe it to be true, nevertheless. A man with a good heart will be fair and generous and kind to his machinery.

Well, just what does that mean? It would be only repeating the age-old counsels if I were to mention keeping the bearings all well oiled, the various metal parts wiped up and the running gears free from anything that would invite rust, or speak of housing the machines when not in use. We have been told this a thousand times. The advice is good and we need to take heed to it. If we were to do these few simple things we would add a good many years to the life of our farm implements. Nor would we be doing anything that the maker of machinery would not be glad to have us all do; for I am sure these men love their handiwork so well that they would rejoice and be glad if they were to find every machine snugly tucked away in good order if they were to visit your farm or mine. Possibly they might not make quite as many machines as they otherwise would, but the happiness they would experience in knowing that farmers had pride enough in their good farm helpers to take care of them would far offset that.

So let me pass over those oft-made suggestions and let us think for a moment of one or two things that are not so frequently in the minds of those who have the handling of farm implements. The time to be particularly watchful lest trouble come to our machines is when they are in actual operation. Have you not seen men slam machines through, as if they were indeed nothing but things of wood, iron and paint? Down across the field they go at top speed, utterly disregarding everything that arises, so long as the wheels keep going round. It makes no difference what the knives of the mower strike—stick, stone, or solid rock. Go through—that is the thing. I have seen men drive right on to a stub and bring up with a jerk that would throw them off the seat of the mower or binder. Such a thing is a terrible strain in every part of the machine. If a pitman is not broken, or one or more knives, the chances are that the section bar will be thrown out of adjustment, so that the mower never will do as good work as it did before. A little watchfulness would have avoided all that difficulty. A thrifty farmer would not have permitted the stub to be in that place anyway.

And then, how many times have you seen planks or other kinds of machinery tumbled right on to the

mower or binder when in the barn. What does it signify if the paint be knocked off or the woodwork marred deeply! The machine will work just as well; so these careless men say. What is the use of worrying over such little things as that? It is only a machine. When it is gone we will get another. Get the most you can out of it as soon as you can. The manufacturers need the business.

I know there is a difference in men about mastering the working of the simplest machine. Some never can do it. But none of us but might do better than we do. It makes a man a better man and a better citizen to be considerate with his farm machinery.

Alfalfa Advice

BY L. F. GRABER

Where alfalfa is successfully grown it excels all other hay crops in yield to the acre, in its ability to stand drought and to build up the soil fertility, and in its weed-destroying power. Canada thistles, morning glories and practically all common weeds are eradicated by a good growth of alfalfa.

Alfalfa can be successfully grown where soil conditions are right, or are made right for it. It is a particular crop but it requires nothing in the way of soil treatment other than what is necessary to produce the most abundant yields of corn or other crops.

Alfalfa must have a soil with an abundance of lime. Find out if your field is sour, which means that it is lacking in lime, by having it tested. This will be done free, by your county agent, or your Experiment Station will make the test if you will send a half-pound sample of the surface soil. If the soil is badly in need of lime, give it full applications of ground lime rock. Otherwise let alfalfa alone. Be sure that the seed or the soil is properly inoculated.

Use fields that are reasonably fertile, or make them so with applications of manure or fertilizer, or both. Choose a sloping field with good surface drainage and good under-drainage.

Avoid hardpan sub-soils. Use clean ground where well-cultivated crops have preceded the alfalfa seeding. This is reasonable insurance against weeds. Have the seed bed well-prepared and firm. This is best accomplished with a corrugated roller.

Sow the alfalfa with one bushel an acre of an early ripening nurse crop, such as barley or Early Kherson oats. In case of lodging, cut these grains for hay. Canning peas cut in June or early July are excellent nurse crops for securing stands of alfalfa. When the nurse crop is taken off early the alfalfa is better prepared to withstand the summer drought.

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Your Spring Plowing

WHEN you plow your tillage lands this spring you will give your tractor its severest test. You will realize then that it takes good oil to plow your furrows straight, and deep, and true.

It will be steady, hard-plugging work all day long, with the engine running at full load every minute. You'll need every ounce of power you can get out of the machine.

And you'll get it, too, with TEXACO TRACTOIL. For TEXACO TRACTOIL is made for just those conditions. It has a different body than motor oil, because the work is different. The Texas Company makes motor oils as well as TRACTOIL. We would not make both if one would do for both purposes.

Sold in 55- and 33-gallon steel drums, wooden barrels and half-barrels, and 5-gallon sealed cans. Your dealer can tell you the right grade for your particular tractor.

THE TEXAS COMPANY

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The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder, that no gasoline can leak into the crank case. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



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CYCLONE SAW MILL BLOWERS

Ready to install on any make of mill. Will carry all sawdust anywhere from 25 to 100 feet. Save the time and labor cost of constant shoveling. They pay for themselves many times over in the course of a year. Simple to install and fully guaranteed. Operated with $\frac{1}{4}$ to $1\frac{1}{2}$ H. P.

Write immediately for circular and prices.

THE RAMEY MFG. COMPANY
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IRRIGATE Your Field and Garden


Get larger yields and profits. Provide fire protection for your buildings, and water for your stock, by installing an

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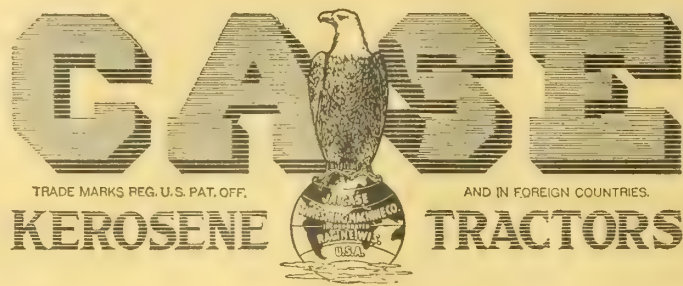
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Mention The American Thresherman and Farm Power



Plenty of Power Available—Delivered to Best Advantage

KNOWLEDGE of thresher power requirements, gained through continuous manufacture of Case Threshers since 1842, has been utilized to the fullest extent in designing and building Case Tractors.

The Case four-cylinder tractor motors are all equipped with a Case fly-ball type, throttling governor, insuring uniform speed of both engine and driven machine. Steady motion is absolutely essential to successful threshing or hulling.

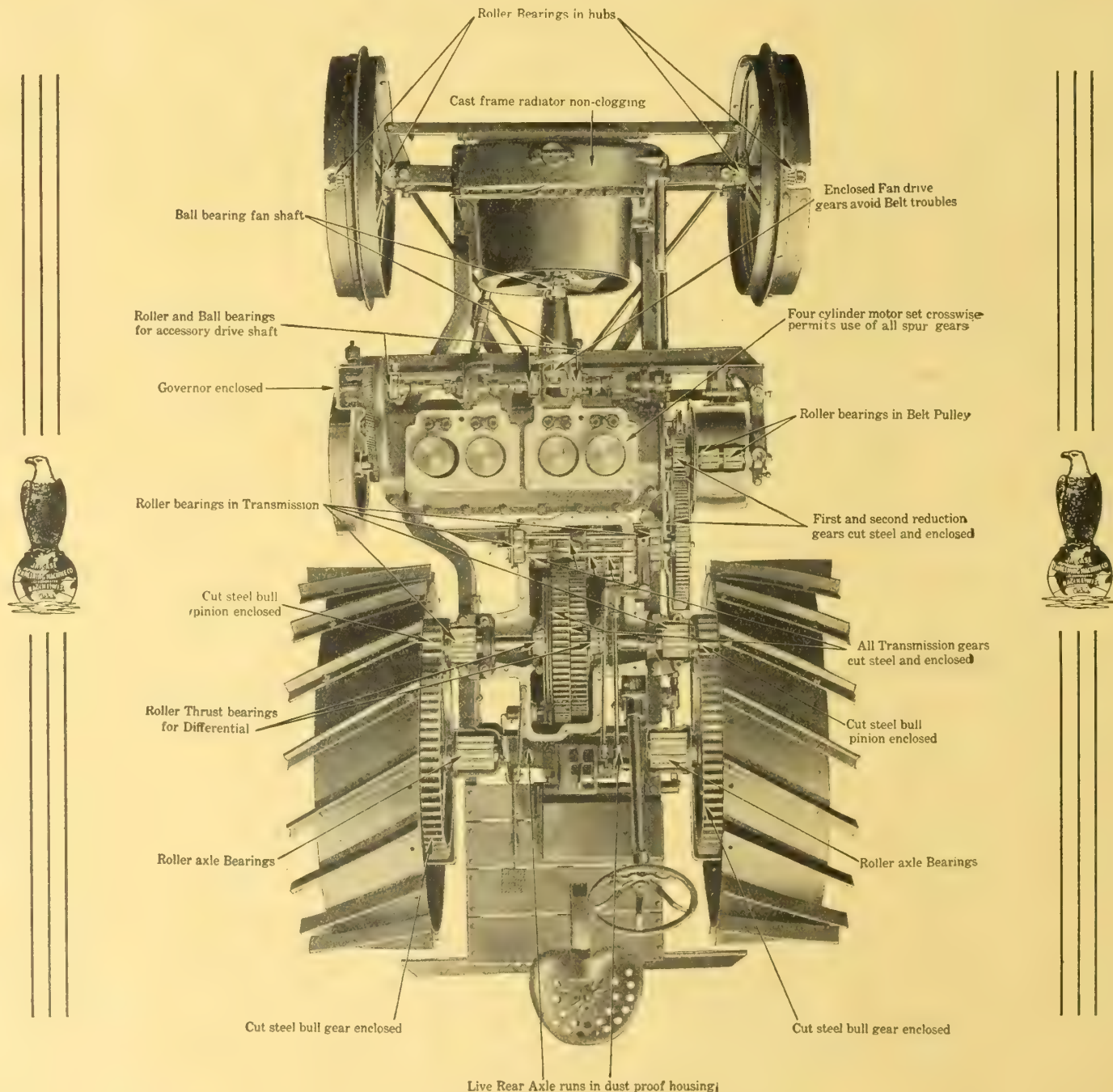
The Belt-Pulley with clutch is located most advantageously—mounted directly on the crank shaft, where it delivers the full power of the engine. Its location on the right side of the tractor, parallel with its length, en-

ables the operator to get a clear view along the belt to the driven machine. It requires only a moment to "line up"—throw the belt over the tractor pulley and back into it. An efficient pulley brake makes it possible to stop the belt-driven machine quickly when necessary.

The Case 22-40 Kerosene Tractor (illustrated here) will handle a 20-bar cylinder 28 x 50 or 32 x 54 Case Thresher equipped with Wind Stacker, Feeder, and Grain Handler. Case Tractors are built in different sizes to meet all farm belt power requirements.

Write for catalog of Case Kerosene Tractors and remember we still make the world-famous Case Steam Tractors.

Illustration shows Case 22-40 H. P. Tractor with cylinders removed and gear covers partly cut away



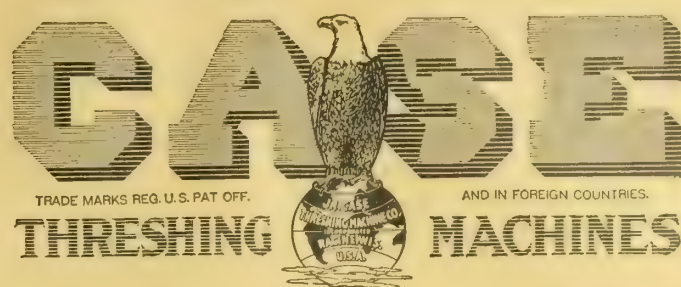
All working parts are enclosed. Note the location of the steering gear on the same side as the belt pulley—a convenience that is a time saver when lining up to a driven pulley.

J. I. CASE THRESHING MACHINE COMPANY

Dept. D451

Racine,

Wisconsin



A Minimum of Power Required—None of It Wasted

CASE THRESHERS are unequalled both as power savers and grain savers. Contributing to power economy are these factors:

Light Weight. Case Steel-built, Galvanized Threshers are lighter, yet stronger than ordinary threshers of corresponding size. This is due to the fact that channel steel, angle and T-bars, also pressed steel and drop forgings, are used wherever possible. This construction displaces heavy, cumbersome wood parts or castings. This is important. It saves power when moving from job to job, and also adds to the strength and durability of the machine.

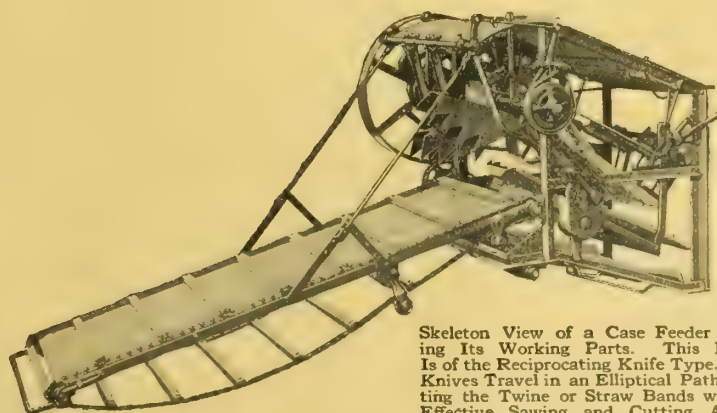
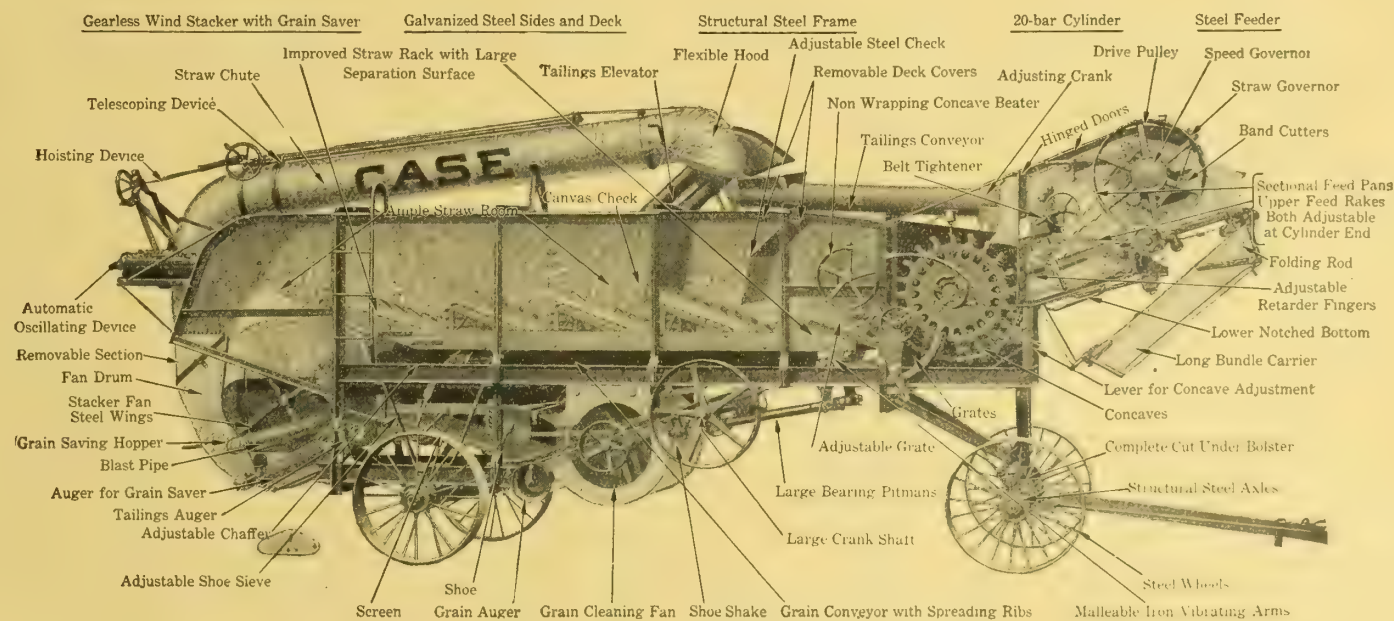
Simplicity. There is an absence of multiplicity of belts, pulleys, sprockets, chains, gears and shafts. This makes for easy running qualities and does away with the need for constant attention to the machine on the part of the operator.

Self-aligning Ball-and-Socket Bearings. All principal bearings are mounted on ribbed boiler plate sides, steel sills or posts. The well-braced, non-warping, rot-and-fire-proof steel frame prevents distortion from the pull of heavy main drive belts.

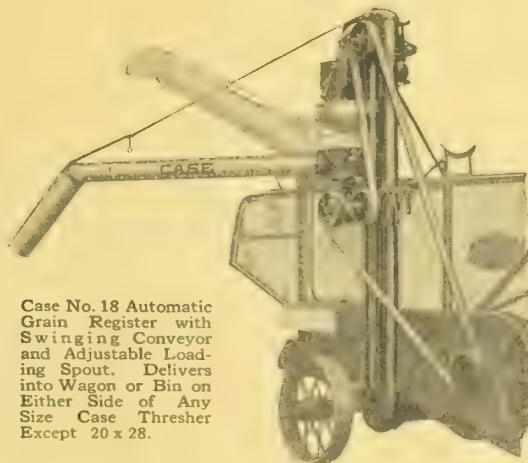
Case Threshers have been made since 1842. The constantly increasing demand for Case Threshers, annually in excess of our ability to meet, indicates that most farmers prefer Case Machines.

Sectional View of 20-Bar Cylinder Case Steel-Built Thresher

Illustration shows sectional view of a 20-bar-cylinder type of Case Thresher with feeder and wind stacker. Case Machines thresh, separate, clean and save all grains and seeds. They are made in the following sizes: 40 x 62, 36 x 58, 32 x 54, 28 x 50, 26 x 46, 22 x 36 and 20 x 28.



Skeleton View of a Case Feeder Showing Its Working Parts. This Feeder is of the Reciprocating Knife Type. The Knives Travel in an Elliptical Path, Cutting the Twine or Straw Bands with an Effective Sawing and Cutting Action. The Sheaf Carrier Is Self-Supporting.



Case No. 18 Automatic Grain Register with Swinging Conveyor and Adjustable Loading Spout. Delivers into Wagon or Bin on Either Side of Any Size Case Thresher Except 20 x 28.

J. I. CASE THRESHING MACHINE COMPANY
Dept. D451 Racine, Wisconsin, U. S. A.

Red Devil Red Devil Tools

Remove the Poor Tool Handicap



Don't always trust to luck and poor tools. A "Red Devil" Plier of drop forged steel, a Cold Chisel of forged tool steel, an automatic Chain Drill, a compound leverage Bolt Cutter and tungsten steel Hack Saw Blades, and a Hack Saw Frame, handy at the right moment, may save you from many a serious breakdown.

Red Devil Combination Plier

A tool with plenty of strength and backbone. Has 3 wire cutters, a pipe grip and a nut wrench, making it suitable for general tractor and implement repair work. Forged of tool steel, and guaranteed of course.

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Agents wanted

Asked and Answered

Question of C. H. I wish to test my boiler, and I should like to know how much cold water pressure I should have to make it safe to carry one hundred and forty pounds of steam?

Answer.—In giving a boiler a cold water test, it is the custom to test it to a pressure fifty per cent greater than the steam pressure at which the boiler is to be operated. If you wish to carry a steam pressure of one hundred and forty pounds in your boiler, you should test it with cold water to two hundred and ten pounds. If the boiler stands up to this pressure with entire satisfaction, you can feel confident that the lower pressure which you will be using with the steam will not be dangerous.

Question of T. J. L. There is a sharp knock in the steam chest or cylinder of our engine when it pulls hard. Some time ago I babbitted the eccentric on this engine, and it runs fine; but since that time, this knock has come. I set the valve back to the same mark on the valve and valve seat, as before the eccentric was babbitted.

Answer.—The following is a partial list of the causes that lead to the knocking or pounding of a steam engine:

1. Water in the cylinder, due to priming or to excessive condensation of steam.
2. Loose piston rings or the piston loose on the rod.
3. The cylinder head loose. This can be easily seen and the remedy is obvious.
4. The valve loose on its stem.
5. Back pressure too high, due to the valve being improperly set.
6. Pressure plates on the back of the valve not properly adjusted.
7. Cross-head shoes loose or not properly adjusted.
8. Connecting rod bearings not properly fitted.
9. The crank pin loose in crank disc or the crank disc loose on the shaft.
10. Lost motion between the eccentric and eccentric strap.
11. Lost motion in the reversing gear.
12. The flywheel loose on the shaft.
13. The main bearings too loose.
14. The valve improperly set.

You say in your letter that this knocking in your engine did not develop until after you had babbitted the eccentric which operates your valve. This being the case, it is very probable that the difficulty is that your valve is not now properly set to give equal lead on both ends. If the valve is set in such a way that there is a good deal of cushion at one end and none at the other, the engine

will pound at the cross-head, crank pin or main bearings,—and maybe at all three places. The object of the cushioning of the steam is to prevent the strain of reversing the direction of the piston, cross-head and connecting rod at the ends of the stroke, from coming on the bearings and, to make it come upon the cylinder heads instead, by meeting the resistance of the compressed steam. Therefore if a valve is set with too much lead at one end and none at the other, the engine is liable to pound. I believe probably if you will reset your valve, making sure that you have equal lead on both ends, this pounding will cease.

Question of W. G. N. Can you tell me why I find it impossible to keep my boiler fired up? I have new grates and new cylinder and still I cannot keep it hot.

Answer.—It is very difficult to answer your question with any certainty, because any one or more of several causes might make your boiler steam badly. There are two things to consider in such a case: the apparatus that makes the steam and the apparatus that uses it. If either one is in bad adjustment you will have trouble with the steam. Taking up first the generation of the steam, two things may be wrong. The heating surface may be ineffective or the fuel may not burn properly. In the first place, this may be due to scale in the boiler, either on the crown plate or on the tubes or to soot inside of the tubes. In the second case, the exhaust nozzle may not point up the center of the stack or it may not be the right size for the fuel used; thus making a poor draft. There may be a leak of air into the fire box above the fire or at the front end of the boiler, or at the base of the stack. This would act the same as a check draft in a stove pipe, and prevent proper draft. Again, the grates may not have correct air space for the fuel used; thus causing poor combustion.

If the boiler generates enough steam, it may be partly lost before it is turned into power in any one of a number of ways. The piston may leak, the valve may leak steam, or steam may blow into the air through a broken gasket or from some of the valve stuffing boxes. Something may be wrong inside of the steam chest which will allow the valve to lift from its seat at some points in the stroke and allow live steam to blow through into the exhaust. It may be that the valve is not correctly set, thus allowing a waste of steam. Without personally examining the engine and boiler, it would be impossible for anyone to tell with certainty just what your trouble is.

Question of H. F. W. I have been a thresherman for five years. I bought my rig new, and now I find I have been running my belt the wrong way—having been turned with the flesh side next to the pulley. My belts are cracking in a few places on the hair side. Would it be advisable to run them the other way, now that they have been run for five years with the flesh side in? I have kept them pliable by oiling them when they needed it.

Answer.—If you have been running your leather belts with the wrong side out for five years, you surely must have taken good care of the leather, or the belts would be very badly cracked by this time.

We should suggest that, even at this late date, you turn the belts and use them with the proper side next to the pulley. If you do not do this, the belts will continue to crack and deteriorate quickly. If the belts are not very badly cracked as yet, there may but little trouble develop in them after you turn them. The fact that you kept the belts in very pliable condition is probably the only reason you do not have an expensive replacement to make.

Question of J. J. How much difference in heat value is there between good coal and crude oil, pound for pound? How much crude oil would be required to take the place of two tons of coal? How does crude oil compare in heat units per gallon with gasoline and kerosene? Can you give me any data as to the heat value of wheat and flax straw as compared with coal?

Answer.—Crude oil has about fifty per cent more heat value than the same weight of a good quality of coal. Two tons of the coal you mentioned would probably have as much heating value as twenty-eight hundred pounds of crude oil.

The more refined petroleum product has less latent heat than the heavier product, but in general, the more refined oils can be more easily burned so as to make use of the heat contained. Gasoline, for instance, contains fewer heat units than kerosene, and kerosene fewer heat units than crude oil. As a general rule, however, gasoline can be burned with less waste of these units than kerosene, and more heat units are lost in burning crude oil than either of these refined products. The advantage in using the crude oil is that it is considerably less in cost.

A pound of pure carbon contains 14,500 units. A good quality of coal will contain almost this many heat units. Wheat straw contains about 500 heat units while flax straw has between 7000 and 8000, or a little more than half the heating value of good coal.



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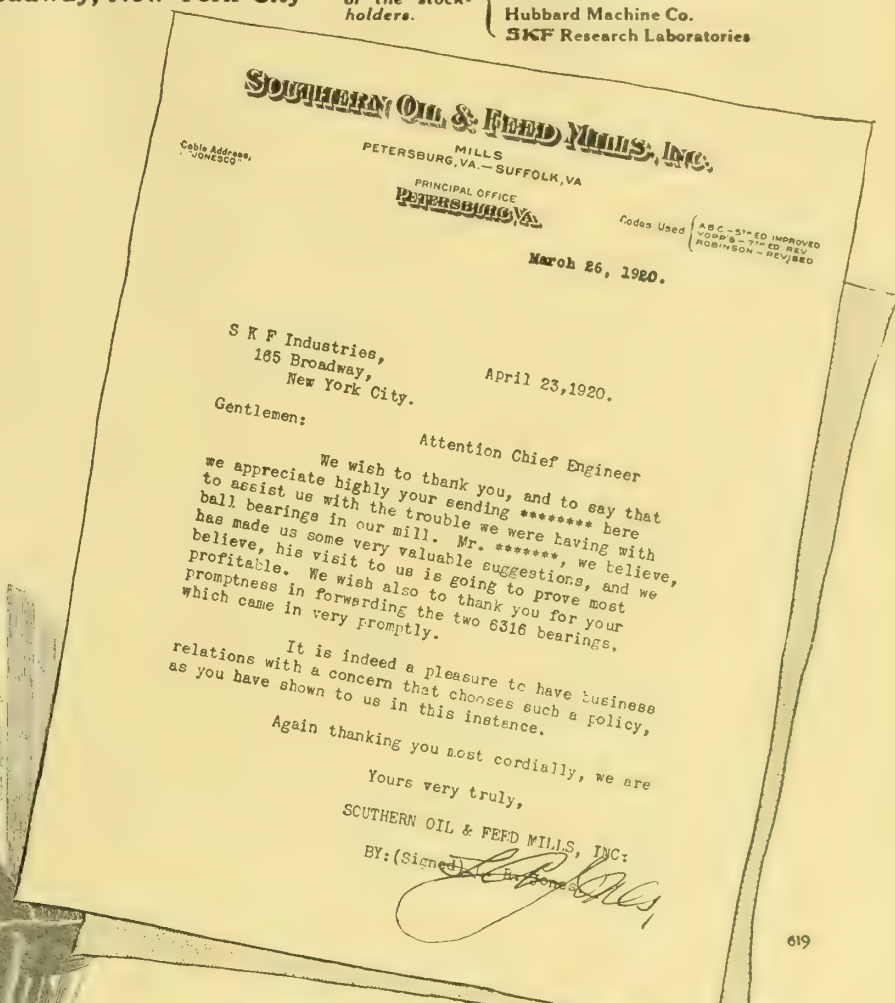
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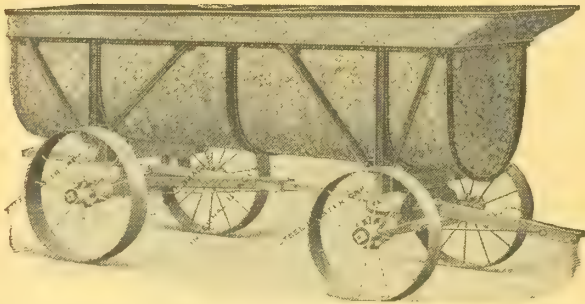
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Parson Dickson's Sermon

I'S gwine to preach de plain truf dis mawnin'," said Parson Dickson, "an' if dah am nobody hit, nobody will be huht. But if anythin' dat I may say seems to fit youh case, take it home an' think it ober an' den ax de Lawd to help yo' overcome whateber wrong dah am in youh daily life. To dat end I calls youh 'tention to de thu'teenth chaptah an' de twenty-fo't an' twenty-fifth vuhses ob de gospel ob St. Mahk, which reads as follows 'But in dose days, aftah dat tribulation, de sun shall be dahkened an' de moon shall not gib huh light, an' de stahs ob heaben shall fall an' de powahs dat am in heaben shall be shaken.'

"If what we hab jest passed through in de last foh or fibe yeahs am not tribulation den I is no judge. If all de wrongs dat am gwine on in de wuhld am not causin' de powahs dat am in heaben to be shaken, den indeed nothin' dat can happen on uth in de way ob wrong am gwine to cause much distuhbance 'up yondah.'

"We am speedin' right up to de bery cratah ob hell, if dah am such a place, an' if dah am not den de debil could affohd to build one widout waitin' foh de price ob materials to drop.

"When yo' realizes what am gwine on in de city whah we lib, which am but a fly-speck in magnitude compahied wid oder cities, yo' can begin to realize how much need dah am foh a refohmation in dis land ob ouhs. Dis city am considahed a model ob morality yet I finds dat wid two oberwuhked judges befoh whom de wrongs which am committed heah am tried, de dockets am ober six hundred cases behind, an' de legislatuah am impohtuned to fuhnish anoder judge to help cleah up de docket.

"In dis same city, one ob de best in de wuhld, wid preachahs an' priests by de dozen, wid chu'ch bells ringin' out de calls to wuhship on Sunday mawnin', I finds a judge tiahed an' worn wid listenin' to de terrible tales until he am ready to break down undah de load ob sin cuhsed wrongs pouhed into his eahs daily widout ceasin', tales dat can hahdly be beliebed. Fibe or six boys at a time, all undah sixteen yeahs ob age, reekin' wid disease to be handed down to dah posterity, plead guilty ob violatin' de law. An inhuman mothah fights wid a policeman 'kase he am protectin' huh daughtah from a moral lepah, drunk on moonshine whiskey dat am made widin de city limits, an' dat mothah am willin' to prostitute huh daughtah foh filthy gold. A mothah willin' to stoop to such degredation! Oh, Sodom and Gomorrah, thou hast been outdone in sin an' iniquity right in ouh midst ober an' ober again!"

"When a judge done bows his haid at de wickedness dat am placed befoh him an' cries out in despaih, 'Tell me what I am to do to sabe dese boys an' dese guhls from eberlastin' death an' from a libin' hell', am it not about time foh de preachahs to help man de life boats an', bravin' de stohm tossed wabes ob wickedness, help to bring de wuhld back to whah it was befoh de gates ob hell were done opened an' de powahs ob dahkness turned loose by de wah dat has almost swept civilization off ob its feet into de awful Niagara ob wrong?"

"It am time to begin a crusade ob righteousness all ober de wuhld. Boys in dah teens steal hundreds ob thousands ob dollahs at a time an' am tuhnnin' into highwaymen ebrywhah. Guhls seahcely in dah teens am becomin' wrecks ob reekin' lepahs, an' polutin' de wuhld wid poison dat does moah dan kills; it done tortures its victims 'til death comes as a relief at de end ob a misahble existence.

"If dah eber was a time foh raisin' an ahmy ob righteousness it am right now. Satan an' his hosts am ridin' upon de crest ob de greatest wabe ob crime dat de wuhld has eber known, an' de very foundation walls ob society am crumblin' undah de strain. De bery host ob hell seems tuhned loose upon de wuhld an' righteousness am driben back by de oberpowahrin' tide ob wrong until it faihly staggahs mankind.

"An' what am de remedy? Listen, chillern. De teachin's ob de Son ob Man, an' dealin' wid ouh neighbah as we would dat he deals wid us; moah practicin' ob de Christian religion, an fewah movies; moah prayah meetin's an' fewah dance halls; moah entahtainment in de homes an' less galavantin' ob de streets by little guhls seahcely approachin' womanhood, an' refusin' to 'low dese precious ones to be meetin' boys in dahkened street cohnahs an' goin' joy ridin' when dey should be in bed; moah hahmony an' less hell. moah righteousness an' less slang an' questionable acts ob ebry kind; less jazz music an' moah hymns dat send up a prayah in song. Dese am de remedy an' until dese refohmations am brought about we may 'speat Satan to rule de wuhld.

"Let de choir lead in singin',

'Dah is a fountain filled with blood,

Drawn from Immanuel's veins,

An' sinnahs plunged beneath dat flood,

Lose all dah guilty stains,'

and lookin' foh de blessin' we will be dismissed."



"The Great Minneapolis Line"



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Gas Tractors

Threshers

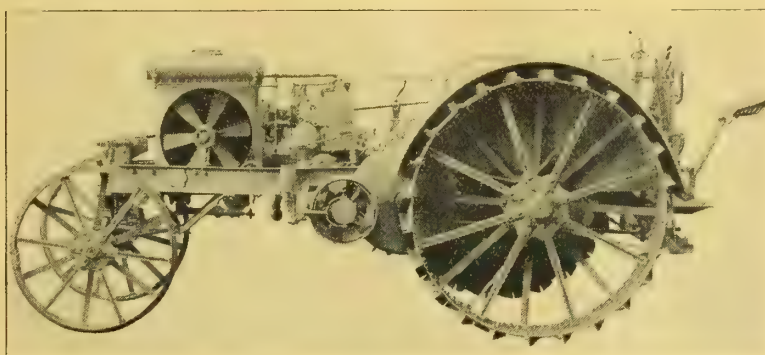
Shellers

WE are now in our thirty-fifth year of building threshing machinery. Not the oldest in years by any means but our growth in that period of time is something to be really proud of.

THE GREAT MINNEAPOLIS LINE from the very beginning was popular in the Northwest. Its name and fame spread from year to year until today Minneapolis machines are in general use from the Ohio River to the Rocky Mountains and from the rice fields of Louisiana and Texas to the great wheat fields of western Canada.

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Power Farming
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Circular is now
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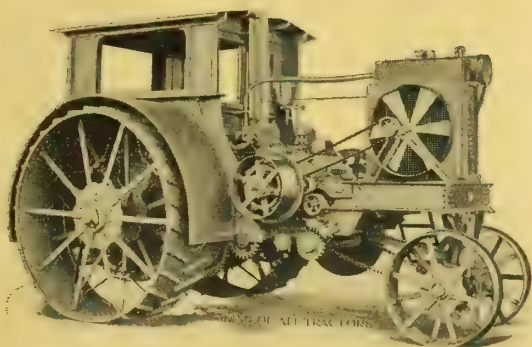
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Better than ever is the All-Purpose tractor for 1921. It is truly an All-Purpose machine—plowing—discing—harrowing—seeding—harvesting—hauling—road maintenance, etc.

The Minneapolis 35-70 Heavy Duty Tractor
can be relied on to furnish steady power for all kinds of work. It operates the largest threshers with all attachments, pulls ten fourteen-inch plows, handles large elevating graders with ease and at any kind of work it is very economical in fuel consumption and upkeep.

The Minneapolis 22-44 Medium Duty Tractor
is a smaller edition of the 35-70. It handles a 32x52 thresher, will pull a pair of three-bottom plows, and it has earned an excellent reputation in connection with road building. The fuel consumption is unusually low. The upkeep expense is small and great is the satisfaction derived from the operation thereof.

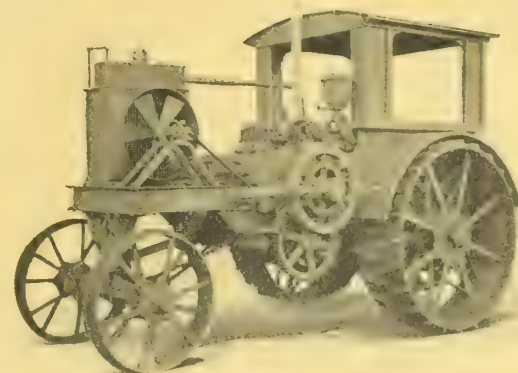
A new size has been added for 1921—a 17-30 General Purpose machine



35-70 H. P.

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22-44 H. P.

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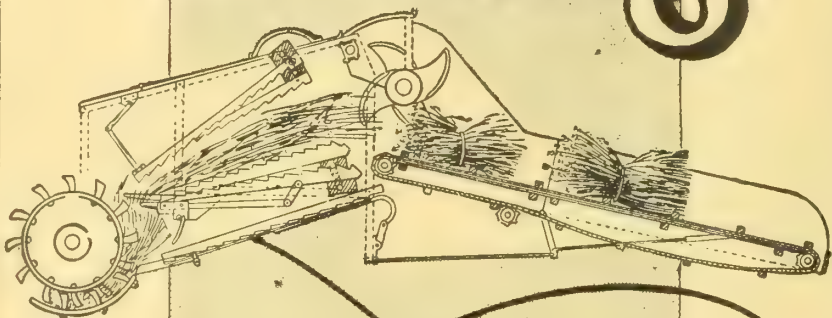
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Mention The American Thresherman and Farm Power

Women's Department

The Voice of Spring

I come! I come! Ye have called me long,
I come o'er the mountains with light and song!
Ye may trace my step o'er the waking earth,
By the winds which tell of the violet's birth
By the primrose stars, in the shadowy grass,
By the green leaves, opening as I pass.
—Hemans.

The Children's Birthright

BY HENRY TURNER BAILEY
Director Cleveland School of Art

All children ought to be familiar with the open country. They should know the joy of playing in healthful mud, of paddling in clean water, of hearing roosters call up the sun, and birds sing praises to God for the new day.

They should have the vision of pure skies enriched at dawn and sunset with unspeakable glory, of dew [drenched] mornings flashing with priceless gems; of grain fields and woodlands yielding to the feet of the wind; of the vast night sky "all throbbing and panting with stars."

They should feel the joy of seed time and harvest, of dazzling summer noons, and of creaking, glittering winter nights. They should live with flowers and butterflies, with the wild things that have made possible the world of fable.

They should experience the thrill of going barefoot, of being out in the rain, without umbrellas and rubber coats and buckled overshoes; of riding a white birch, of sliding down pine boughs, of climbing ledges and tall trees, of diving head first into a transparent pool.

They ought to know the smell of wet earth, of new mown hay; of the blossoming wild grape and eglantine; of an apple orchard in May and of a pine forest in July; of the crushed leaves of wax myrtle, sweet fern, mint and fir; of the breath of cattle and of fog blown inland from the sea.

They should hear the answer the trees make to the rain, and to the wind; the sound of rippling and falling water; the muffled roar of the sea in a storm, and its lisping and laughing and clapping of hands in a stiff breeze. They should know the sound of the bees in a plum tree in May, of frogs in a bog in April, of grasshoppers along the roadsides in June, of crickets out in the dark in September. They should hear a leafless ash hum, a pine tree sigh, old trees groan in the forest, and the floating ice in a brook making its incomparable music beneath the frozen crystal roof of some flooded glade.

They should have a chance to chase butterflies, to catch fish, to ride on a load of hay, to camp out, to cook over an open fire, to tramp through new country, and to sleep

under the open sky. They should have the fun of driving a horse, paddling a canoe, and sailing a boat, and of discovering that Nature will honor the humblest seed they plant.

Things that children can do in cities are not to be compared with such country activities. Out of the country and its experiences has come and always will come the most stimulating and healthful art of the world. One cannot appreciate and enjoy to the full nature-books, novels, histories, poems, pictures, or even musical compositions, who has not had in his youth the blessed contact with the world of nature.

I do not forget what cities have done for us, and always must do; but one can get all the best a city has to yield by visiting it, whereas one cannot reap all the harvests of the country except by living there in childhood. And I feel somehow that such a life in the country is the birthright of every child. There is truth in Cowper's statement that God made the country and man made the town.

I believe that every child of God has a right to see the country—the house his Heavenly Father made for him—unobstructed by brick walls, unspoiled by filth and undimmed by smoke. And one of these days, somehow, all children born into the world will be given a chance to enjoy to the full their inspiring patrimony.

Living in the country in childhood, "the voice of the Lord God, walking in the garden in the cool of the day" is more likely to be heard; and, being heard by all, that Voice will be answered more universally, and with warmer love.

The Reflections of a Thresherman's Wife

WRITTEN BY HERSELF

I was in town today—no, not shopping—just exchanging eggs for groceries. Mrs. T. was in town, too.—she was shopping—recognized me by a cool stare and a barely perceptible nod of her stately head and so after I got home I began reflecting again.

Somehow I just couldn't help it. I wonder why she wasn't more friendly—was it because I looked so shabby in my year-before-last-style coat and hat? She was wearing a beautiful new coat—a lovely garment—now I'm not a bit envious—but if the T's and some others would pay their last year's threshing bills I could a-shopping-go also.

Now I wonder am I getting "catty?" I sincerely hope not, for it doesn't cost anything to reflect and it relieves the feelings immensely—just like letting off steam when the pressure is too great.

I "reflect" that the T's are the biggest kickers in friend husband's whole ring—always afraid of short "machine measure"—the engineer wastes fuel—the separator doesn't do clean work—too much grain left in the straw. She feeds the threshing crew so sparingly and with so much evident reluctance that they can hardly subsist until the job is done—never allows a filthy thresherman the privilege of sleeping in her house—the nasty, filthy things, the barn is almost too good for 'em in her estimation! The T's advocate farmers owning their own threshing outfits—that threshermen are a common nuisance and should be abolished.

Well, if all the people in the world were like the T's, threshermen would soon be completely "done away with," for it takes something to live on besides unpaid bills.

But why blame people for inconveniences and heartaches that they cause through ignorance or the follies of their ways, and while we are "reflecting" we may just as well reflect on something pleasant.

For instance, last summer each Monday morning I bent my tired back over the wash-tub, mingling the sweat of my brow with the dirty suds that flowed so steadily through those threshing overalls and jackets. I rubbed and scrubbed long, hard and faithfully, until the black dirt and greases disappeared and after hours of hard toil I could find a trace of the original color of the fabric. And while I labored I looked ahead to this very time when the head-of-the-house would be with us again and it would seem like home again.

I planned cosy, chummy evenings when, while the snow blew and the sleet cut the air, we'd talk and plan great things for another year.

But now the new threshing catalogues (I suppose that's what you call 'em) are arriving and the carrier brings one almost daily.

In the evening when the chores are all done, supper over and dishes washed, I'd love to have a social chat but my thresherman-husband has his nose buried in one of those machine books and he's so wrapped up in it that I'm quite positive that I could saw both his legs off and he'd never know it!

I've looked the pesky things through diligently and I'll swan I can't see what can be so very, very fascinating. And I'm quite sure, too, that if I'd study them over as diligently and as constantly as he does I'd know them by heart and wouldn't need the book by me eternally.

As I sit here patching underwear or darning endless socks and little stockings, I try to scare up a conversation but the results are very discouraging, for my very best efforts bring only a gruff monosyllable and

more often only a "grunt" for a reply.

The mysteries of feeders, steering devices, connecting rods, drive wheels, concaves, drive belts, pulleys, band knives, weighers, etc., etc., must be most engrossing that they occupy the mind to the exclusion of everything else.

Little Joe is a chip off the old block, too. I confess it with much misgiving, because I had something else in mind for him.

But the threshing fever is born in the lad and the germ is already well developed in the boy. Already he knows every make of engine by a mere glance at the picture of one.

My sewing machine, the cream separator, little sister's doll buggy, baby's carriage, in fact, anything with wheels is a threshing rig and the tea-kettle does business as a steam engine. He loves to purloin those precious machine books when his dad is away from home—he always has them himself when he's here—and he studies them as diligently as does the "old man" himself.

That's all the time the youngster is still, so they're good for something anyway!

I've come to the conclusion that the thresherman disease is sort of hereditary, like tuberculous; so why fight against it? Every house has its skeleton—mine isn't nearly so bad as lots of 'em—in fact, I wouldn't trade with anyone I know. It's just like a continued story, very interesting but sort of unpleasant waiting for the next installment!

Aunt Sarah's Clothes

J. S. G.

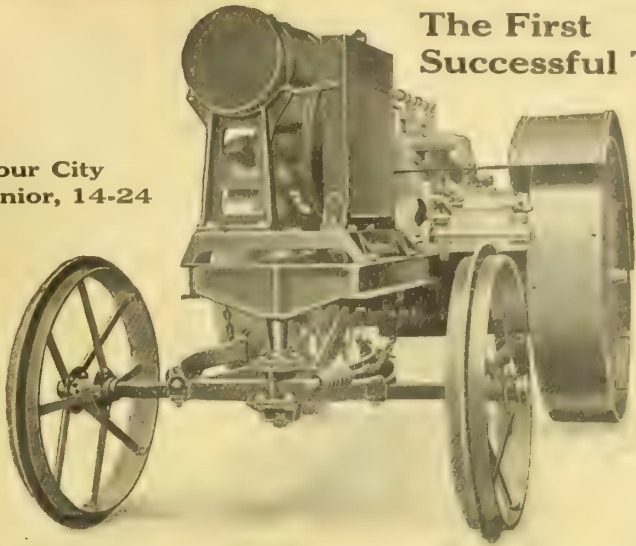
It must have seemed a very curious thing for me to do, when I came home from helping to "look over" old Aunt Sarah's belongings, but this is what I did. I went up stairs, washed my hands and face, combed my hair, fixing it as attractive-looking as I could, just as if I was going to a wedding or some other equally important festivity, and put on my best dress!

Now I will tell you why I did it.

Aunt Sarah had been buried two days before. She had lived to a fair age, though she was by no means so old as lots of people live to be. Because she had lost her husband and her two daughters, it devolved on my sisters and myself to sort and care for her personal belongings. She had quite a tidy little property and had never needed to feel "pinched." She lived alone, that is, in a home of her own, sensibly declaring that it was better all around, than for her to come to live with any of us. She had a great many friends, lots of company, was invited out more than she cared to go, and was never a person whom you felt you should pity.

She had kept the house, where she

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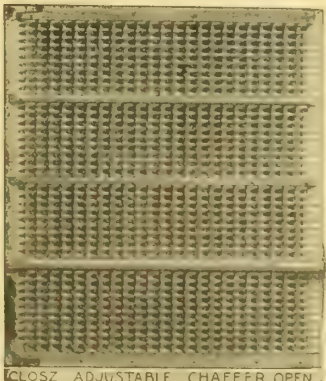
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The famous Mule-Kick Separation bats the threshed grain out of the straw in a very effective manner—almost to the point of perfection—and the Rusher cleaning mill, many of our farmer friends have said, cleans the grain fit for sowing. Five sizes. Get our free catalog.

GUS KAEDING, Thawville, Ill., on March 14th, 1921, wrote us the following letter: "I received a letter from you some time ago in which you wanted to know how I like the Port Huron 19 H. P. Longfellow High Pressure Compound Engine bought of you last January.

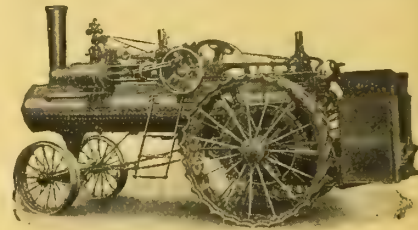
"You people always said it was the most economical engine in the matter of fuel and water, but I didn't hardly believe it. I have since certainly found it to be what you claimed. I had always thought the—engine was the most economical, but after running the Port Huron I could certainly tell a difference in the two makes of engines.

"I put a test on the engine this fall shelling corn. A man came to me who had sold his corn, but did not have any fuel. He said if I could furnish the fuel, he could give me the job of shelling his corn.

"I loaded up with 1300 lbs. of coal, pulled three and one-half miles to his place, shelled 2250 bushels of corn and pulled back home with those 1300 lbs. of coal. This is a fact—no guess work about it, as I weighed the coal.

"The Port Huron Longfellow High Pressure Compound is the engine for me." (Signed) Gus Kaeding.

PORT HURON Longfellow High Pressure Compound Engines will deliver more power on a given amount and kind of fuel than any single expansion or simple engine of their size in the market



today. The long tubes save heat and the compound cylinders and balanced valve save steam—that's why they do it, and that's why the farmers prefer them. Two sizes. Catalog free.

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Port Huron, Mich.

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Port Huron Engine & Thresher Co., Wichita, Kans.
Port Huron Co., of Ill., Moberly, Mo.

Port Huron Mach'y Co., Ltd., Minneapolis, Minn.
Foreign Trade Office, 24 State St., N. Y. City.

had reared her family, pretty much as it had always been. It was an old-fashioned, dignified place, with a large expanse of lawn, and furnished in the good taste of the days before our orgy of ornamentation. Aunt Sarah always "lived well." Her table was never scrimped. She had, too, good clothes. But—well, now we are near the reason why I put on my best dress when I came home from Aunt Sarah's, after we "girls" had disposed of her personal things.

We had decided what of the furnishings we cared to keep and then we went into the closets. Such a surprise as awaited us! One peculiarity of Aunt Sarah's I have not mentioned. She certainly was "no dresser." None of us had ever dared to remonstrate with her on the subject; one didn't "remonstrate with" Aunt Sarah, however much one might "remonstrate about" her! I had had some adoo, in my own family, to keep my young daughters from showing too plainly that they did not in the least approve of her clothes, when she came to visit us. She was always neat and clean, oh yes. But my Sallie (who was named for her) was certainly justified in her judgment when she said:

"She looks as if she had walked out of a fashion plate of half a century ago!"

Now I had always supposed Aunt Sarah regarded expenditure of money

for clothes, if not a sin, at least an unnecessary indulgence. But when we went into her closets, what do you think we found? Clothes, and clothes, and more clothes! I know there were at least fifteen fine dresses that I had never set eyes on, and I used to see Aunt Sarah as often as any one, I am sure, and under all conditions of entertaining and being entertained, as well as in her home and mine on "every days." In one closet, the one off her bedroom, were the dresses we were accustomed to see her wear. But off the hall closet up stairs, covered with neat protectors and hung carefully on hangers, was such a variety of clothes as I never dreamed of her possessing.

They were not all of one "date," either. If you had had fashion plates of the succeeding years, you could have arranged them in chronological order, at least two dresses for every year, for I don't know how many years! And I venture to say that none of them had ever been worn, save as they were tried on in making!

Of course they were not entirely wasted, for we divided them up and will have them fixed over for ourselves and the daughters for nobody knows how many years to come. Many of them will have to wait some time, however, for you just can't make a much-cut-up basque,

for example, into a no-fit-two-seam blouse of today! But however well they might all "make-over" I could not help feeling rebellious, as I looked at that array of clothes. Why didn't Aunt Sarah wear them!

I suddenly realized that there might be a wee bit of Aunt Sarah in me. I am so anxious always to be prepared for the possible unexpected contingency that it is very easy for me to wear my clothes less than I save them. I am aware that the tendency is one that seldom shows itself in the young generation, just coming on. But maybe they are not altogether unwise, in insisting on the enjoyment of things now. There are a lot of things I shall have to think out, as a result of finding Aunt Sarah's unworn dresses. Maybe some other woman of middle years needs to think them out, too.

Tried and Found True

(The Editor of the Woman's Department has tried all the recipes printed below, in her own kitchen, and found them "true.")

NUT-LOAF.

(A good substitute for meat.)

Two cups finely ground nut meats; two and one-half cups fine bread crumbs; one large onion; two eggs; one teaspoon salt; pepper and "mixed" herbs to taste; one cup hot water; one tablespoon butter.

One of the cups of nuts may be

peanuts. Place mixture in well greased pan and baste frequently while baking.

PARSNIP BALLS.

After the parsnips are boiled, put them through a ricer or mash with a potato masher. Add salt, pepper and two tablespoons butter. Make into small balls or cakes. The mixture will stick to the hands, but this may be avoided by using a little flour. Roll these cakes in flour and sauté in hot butter.

TURNIP BALLS.

Wash and pare the turnips. With a vegetable cutter cut into small balls; drop into salted, boiling water and cook until tender; drain and pour a little melted butter over them or serve with a cream sauce or they may be scalloped.

BAKED POTATO.

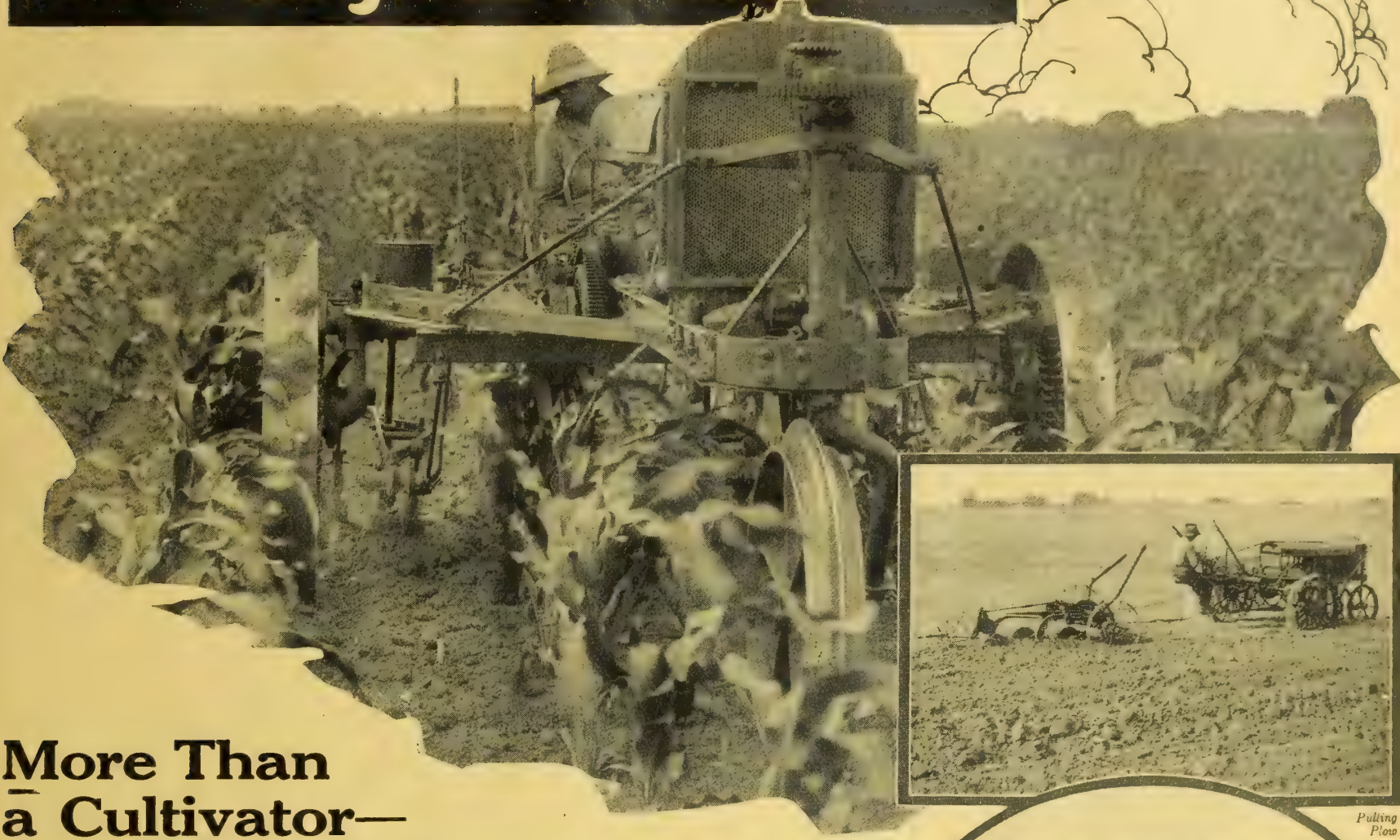
Wash potatoes until clean; bake in a very hot oven; when done, break open in the middle at once to let the steam escape and thus have a mealy potato.

BOILED POTATO.

Potatoes should never be put into cold water; have plenty of salted, boiling water and drop the potatoes into it; when done, drain, place the saucepan on the back of the stove for a few moments with the cover off to let the steam escape. Shake the saucepan two or three times and the potatoes will be very mealy.

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Avery Motor Cultivator Cultivating Corn.



More Than a Cultivator— More Than a Tractor

"Here is the handiest and most useful power outfit that any farmer could own," is the way one owner speaks of the Avery Motor Cultivator.

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Using this machine in your corn field puts speed and certainty into your planting and cultivating. With it you can easily cultivate from 18 to 20 acres a day. You can get over your field in less time than with any other method of cultivating. You can keep your corn cultivated at the right time in the right way to raise bigger, more profitable crops.

You can put this machine on your binder and make it hum hour after hour, even in the hottest weather. You can motorize more work on your farm than you ever expected might be done satisfactorily with motor power. You can do with this machine all that you have thought could be done with the motor cultivator, and far more than any small tractor could possibly do.

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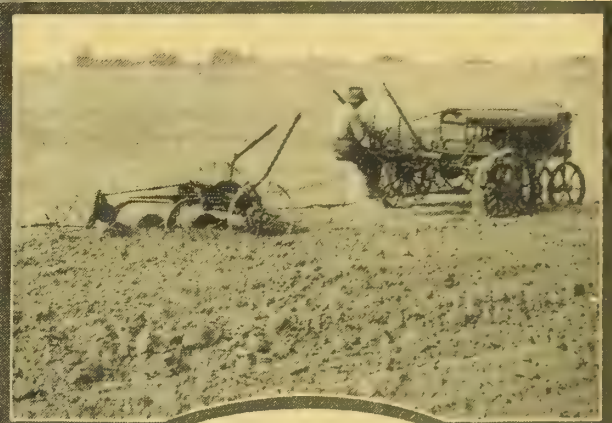
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Planting Corn



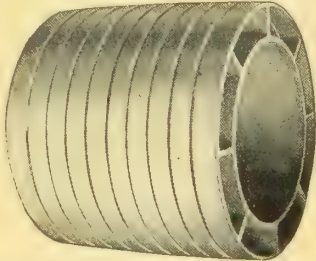
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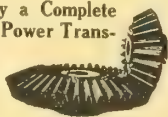
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The Care of the Mowing Machine

(Continued from page 10.)

penetrate a dead stem or leaf and allow it to hang on the guard which immediately gathers more and more trash until the mower has to be stopped and trash cleaned off.

The sections of the sickle must be timed with the guards, that is, they must register to make clean and easy cutting. This means that at the end of each stroke, each section must stand centered with the center of the guard (as shown in Figure 6). By this centering the section will perform two complete shearing operations at each stroke of the sickle. Unless this is done, small bunches of grass will either be left or will be drawn in and wedged between the section and the plate, making it necessary to pull the stems rather than cut them. On some mowers a tongue carried too low or too high will change this position of the sections, but most mowers have an automatic adjustment for this and keeps them in register at any position. A too short or a too long connecting rod will cause an unregistered position. This may become so by the rivets in the ends of the connecting rod becoming loose and wearing an oblong hole in the wood. When re-riveted they will leave the rod longer than before.

The sickle should be in true alignment with the crank on the pitman wheel to avoid extra thrust on the connecting rod bearings or the guide plates of the sickle. To determine this, a line may be stretched from the center of the crank pin to the outer end of the sickle. With the line in this position, the full length of the sickle should lie in line with it; if it does not, the adjustment found on the torsion rod holding the bar to the frame of the mower should be lengthened or shortened until the sickle does line.

One of the things to avoid is side draft. Unless the sickle cuts each stem with a clean cut and does it quickly, a great drag is produced by the numerous stems. For this reason the registering and alignment are very essential.

The back sickle guide, or thrust plate, is inserted in each guard in some mowers while in others it is attached to the guard bar. In the former type it is reversible, allowing two wearing edges. In case it becomes necessary to reverse these, all of them should be reversed at the same time, otherwise the thrust of the sickle bar will fall only on those which project farthest forward.

The keeper plates are those on top of the sickle, to hold it down to the guard plates. It is some times supposed that these should be tight against the sickle sections, but such is not the correct setting of them.

These keeper plates are more to hold the sickle in place when it is not cutting than when it is cutting. As mentioned before, the pull of the grass holds the sickle sections to the ledger plates while cutting and the harder the pull the harder they are held together. So the keeper plates are more to hold the sections from striking the top part of the guard when running idle, that is, when running but doing no cutting.

With sickle sections costing but from five to seven cents apiece, it is a waste of time to grind at a broken or badly worn section edge, attempting to form a new cutting edge on it. The defective one may be removed and a new one replaced more quickly than the old one can be ground. The new one will do better work than the old one can be made to do with any amount of grinding.

There can be no better investment made, on the farm, than to have the following parts on hand after the second year of the mower's service. This list is made up of parts which usually give trouble first.

1. A box of extra sections with rivets.
2. The crank pin boxing on connecting rod.

The Home of Sudan Grass Seed

(Continued from page 11.)

each year. It is grown without irrigation and has proved itself to be especially adapted to droughty seasons. It is shown by the meteorological records of the Lubbock section that the average rainfall there for the last twenty-seven years has been twenty-two inches a year. It is pointed out that seventy-five per cent of this rainfall comes during the growing season of Sudan grass and other crops.

No unusual methods are necessary in planting and harvesting Sudan grass. Ordinarily the seed is planted with a two-row planter. Upon some of the farms last season three of these planters were ganged-up and, pulled by a small tractor, were able to plant forty acres a day. It is an open prairie country and many of the fields are a mile long. The farms are especially adapted for the successful use of tractors. The harvesting of Sudan grass is done by an ordinary wheat harvester and threshing is done by a regular grain threshing machine.

So successful has been the production of pure Sudan grass seed in the South Plains region of Texas that attention is being given to the growing of other crops for seed purposes essentially. Already big quantities of cane seed are grown there and

3. A box of ledger plates with rivets.

4. A pitman or connecting rod with straps at ends.

5. An extra bolt with the left hand thread and nut clamping the end of the connecting rod to the sickle head.

In addition, get a sickle head, a couple of extra guards, wheel ratchet lugs, thrust plates and keeper plates and a steel bolt or pin holding the drive wheel ratchet hub to the shaft. These parts cost but little and often some are needed before work can continue.

Using the oil, which has been drawn from the crank case of the tractor, for the mower, has become a habit since the tractor has found a home on our farm; but unless this oil is efficiently filtered through the proper material the practice should not be retained. Small particles of grit and steel from worn parts are as dangerous to the mower bearings as to the tractor. Care must be used if this system is followed.

Watch any part which attracts attention by an unusual sound or action; tighten, oil, or replace with a new part, as the case demands. A few hours' time before going to the field will save as many more during the rush of the haying work. The time of one man early in the season may save the time of three men when man-power is at a premium.

shipped all over the country for planting purposes. The same is true of the different varieties of maize, kafir corn and feterita. Experiments are to be made with beans, peas and products of garden variety. Practically every kind of product that is adapted to the Central and Southern states may be grown in that part of the State. The altitude is about three thousand feet, the land peculiarly free of all weeds and grass, easily cultivated and the harvesting season devoid of excessive moisture.

Almost every farmer who grew Sudan grass for seed last year received a harvest twice as large as he expected. This wonderful supply of seed had the effect of depressing the market, but for the great majority of farmers it furnishes a real opportunity. The Department of Agriculture, in a February bulletin, explains this fully.

"The acreage of Sudan grass has been considerably curtailed in the past by the fact that farmers were forced to pay fifteen to twenty cents a pound for seed. Under present conditions, with an opportunity to buy seed at a low price, it is a good time for farmers in the Central states to provide themselves with a field of Sudan grass next year, which

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can be used either as an emergency hay crop or a summer pasture. Numerous tests of Sudan grass as a summer pasture in Indiana, Illinois, Iowa, Nebraska, Kansas, Missouri, Kentucky, and Tennessee, have indicated that it will carry a greater number of animals per acre during the summer months than almost any other grass now available. Some care in pasturing is necessary, however, on account of the possibility of prussic acid poisoning. The culture of the grass and its utilization as hay and pasture are discussed quite fully in Farmers' Bulletin 1126.

"Another suggestion of practical value to farmers who have become convinced of the value of the grass is that they lay in a sufficient supply of Sudan grass seed to provide for their needs not only this year, but in 1922 also. The discouragement caused by the failure of seed growers to market their product at a reasonable price will undoubtedly cause a shortage of seed the coming year. This will in turn react on the price, and it is likely that Sudan grass seed will again be selling at ten to fifteen cents a pound within the next two years. If the seed is stored where it will keep dry, there will be very little loss in germinating power due to holding it over. It is a wise procedure, therefore, for those who are sure they will want the seed next year to make provision for their planting while the price of the seed is low."

One reader of The American Thresherman and Farm Power wrote us recently asking about the drawbar pull of a certain truck. Another wanted to know how to determine the resistance of different road surfaces. A third reader wanted to know the proper ratio of horse power between one-ton and two-ton capacity trucks. All of these points and thousands of others are covered in The Modern Motor Truck, a new book written by Victor W. Page. This book is an encyclopedia of information for the garage owner and mechanic, and many farmers who own trucks will find it useful.

The Modern Motor Truck contains nine hundred and fifty pages and seven hundred and fifty illustrations. It costs five dollars. Anyone wishing a copy should write direct to the Norman W. Henley Publishing Company, 2 West 45 St., New York City, New York. As the book was published in March, 1921, anyone buying the book can be sure he has the detailed information on the latest models of well-known trucks, as well as a handbook on carburetors and ignition systems.

The Pastor—"So God has sent you two more little brothers, Dolly?"

Dolly (brightly)—"Yes, and He knows where the money's coming from, too. I heard daddy say so."

Feeding a Hungry World



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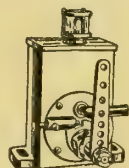
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THRESHER BELT

PATENTS Write for Guide Book and Evidence of Conception Blank. Send model or sketch and description of invention for our free opinion of its patentable nature. Highest references. Prompt service. Reasonable terms. Victor J. Evans & Co., Pat. Attys., 830 Ninth, Washington, D. C.

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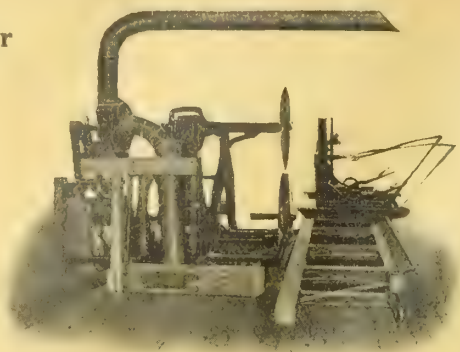
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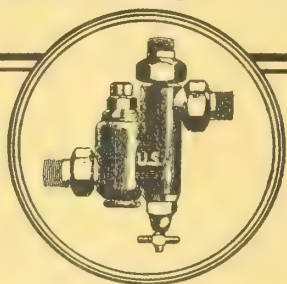
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The American Injector Co., 175 14th Avenue, Detroit, Mich.

Aunt Malinda

THE prophet who predicts the millenium durin' the next year or two will be without honor in most any country. In the very nature of things, the millenium doctrine must be confined to the high Eutopian ethics which do not exist exceptin' in the fertile imagination of any who may harbor such an erroneous idea of all livin' things.

We couldn't get the foundation laid for the realization of such a condition before its founders would be upsettin' the apple cart themselves. When Jehovah created the world and stocked it with men, animals, and fish, and all other livin' things, He created these with a mutual desire to live off of other livin' things, just as he created man to breathe oxygen to purify his blood and with a natural appetite for flesh and fish, without consideration for the beast or the fish which supplies his natural desires for the elements of life.

In support of the contention that might is right, we set up the plea in abatement that God created everything else for man's well bein', and then we set about appropriatin' that which we are taught was created that we might prosper, at the expense of the lives of the animals which we consume. The worm undoubtedly suffers intense pain when we string him from his Alpha and his Omega on a hook, which is evidenced by the way he squirms. But that doesn't hinder men from stringin' the worms on hooks and even, at times, spittin' tobacco juice on 'em for good luck. Then they send the hook whirlin' into the water to tempt the next higher order of livin' things, hungry for food, to snap the worm and in turn to be snapped by the hook, and then, after bein' divested of all objectionable atoms internally and externally, Mr. Fish is prepared for the cormorant maw of a human bein', and here the doxology is ready for the choir.

This is the exemplification of the millenium idea and it's the same road which has been travelled since Adam lived in the Garden of Eden, by every form of animal and vegetable life. So the day in which the lion and the lamb shall lie down together is, and ever will be, only when the lamb reposes inside of the lion, and it will never be safe to allow a little child to lead 'em unless the food supply is materially changed.

As with animals, so with men. We are simply educated animals, and in recent years we've lost considerable ground and have suffered a dangerous relapse in our human education.

You couldn't expect to open the doors of all the cages in Ringling's menagerie and turn all the beasts and birds and reptiles loose and hope for a millenium in the circus business next day, could you? Well, you wouldn't find peace and harmony pervadin' until you'd gotten what was left of the animals back into the cages behind the bars that help create circus millenium. When once the lions began to roar and the tigers to growl and the leopards to snarl, and the fight had gotten under way, the smell of blood and the opportunity for prey would goad these animals onto destruction and to destroyin', and even with the keepers' whips and the hot irons which cause the caged beast to obey, it would require all the skill and tact of the keepers to overcome the disorder created within an hour after this millenium stuff had been staged.

That's why we're passin' through the most tryin' period of the world's history right now. We've opened the cages of disorder and taught disorder, to kill and to slay, by every device known to mankind, and then, when we've temporarily gained the mastery, we've got to get the animals back into the cages and order created out of the chaos of war, and it's goin' to require time to bring us back to the days of 1914.

Oh, the trouble and sorrow, and pain, and death and destruction which have visited the earth since that peaceful period of 1914, when the world had settled down to calm and quietness, when the cornucopia of plenty was runnin' over with every good thing, and then, the act of one man changed all this and caused all the misery and woe that has been our portion thereby!

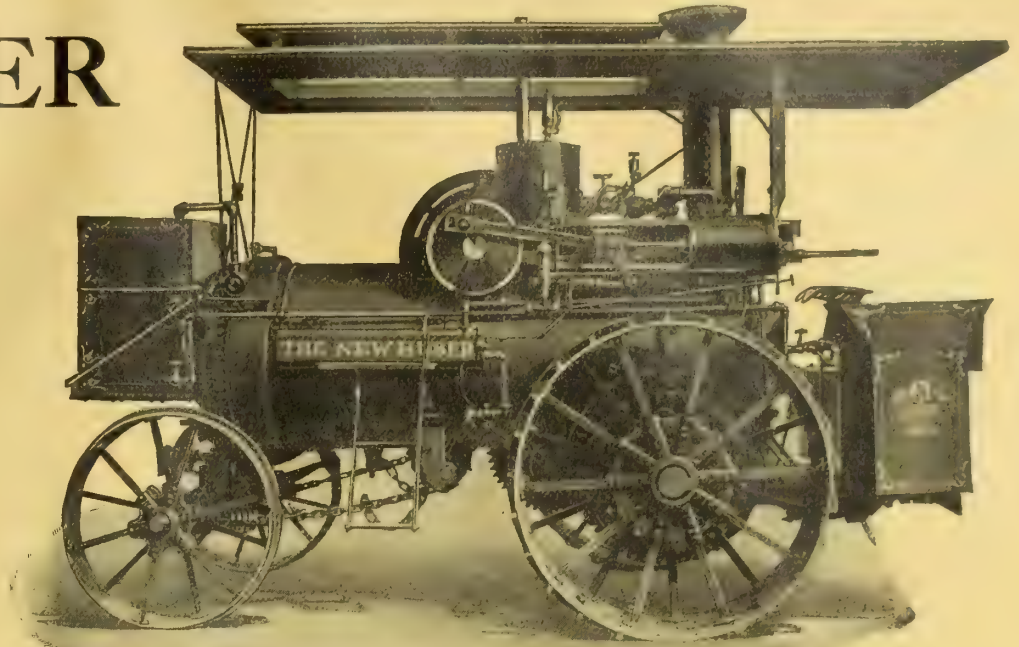
There's work to be done by the wreckin' crew, and that crew should be composed of men and women who understand and appreciate human nature. Right here is where Christian ministers and Christian men and women are needed as never before since the days when God said "Let there be light!" Just now we need the best and bravest sailors who ever manned the life boats, and others to stand by on the shore and help "Throw out the life line," for of a truth many "are sinkin' today."

The ministers of the gospel of every denomination and of every creed should band themselves together into an army of occupation, whose duty it is to erect the Red Cross tents of salvation in every field and in every part of the world and, by prayer and preachin', by precept and example, help dispel the gloom which hangs over the world today.

May the recruitin' stations of Christianity be filled with volunteers and may the God of Righteousness prevail and bring us back to order, and may good-will once more prevail.

THE HUBER ENGINE

Made in 16, 18, 22 and 25 horse power sizes. The Huber return-flue boiler completely surrounds the fire with water, consumes every bit of fuel and conserves heat. Flues accessible from either end without crawling into the fire box. No stay bolts to rust or break.



QUICKER, BETTER WORK

THIS threshing outfit brings you out at the end of the season with a bigger profit, because it is faster, requires less power and fuel, and works steadier with fewer shut-downs and repairs.

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is made up of a simple trouble-proof engine and boiler that is easy to take care of and inexpensive to run. Give it fuel, water and oil and it goes through the year without attention.

The Huber Western Special Separator is designed to operate faster and finish each job sooner. "It saves the grain" and satisfies your customers. Adjustable to long or short, wet or dry straw, and always does the work well.

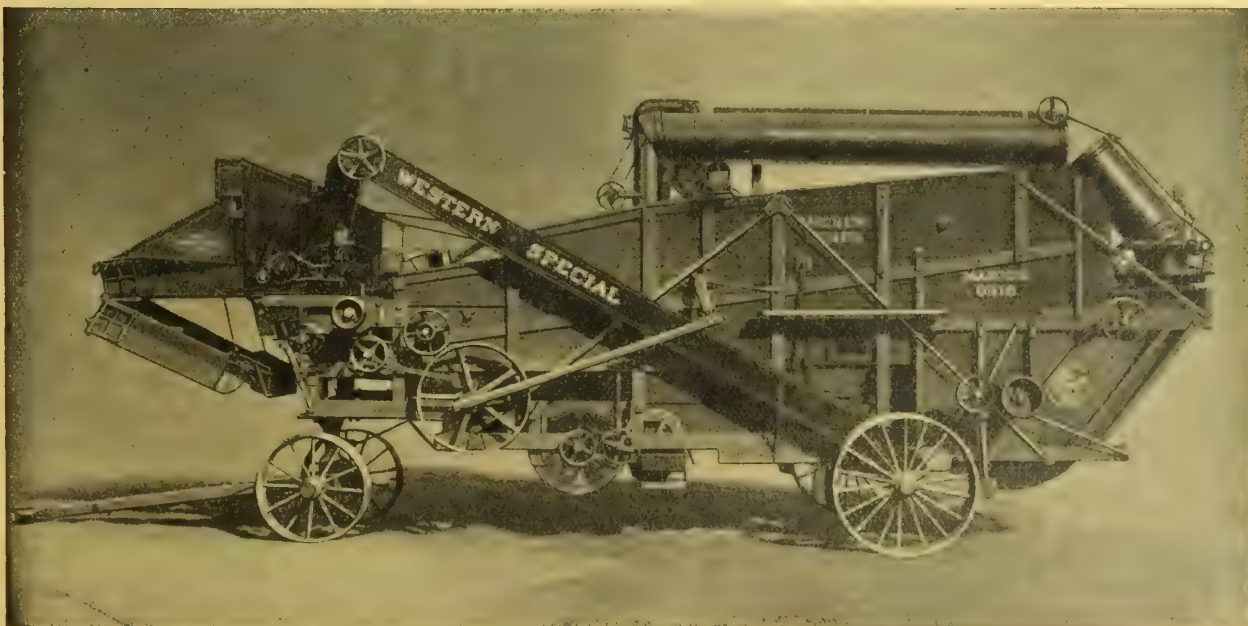
The New Huber Outfit is made by a company that for 44 years has made threshers of the highest reputation among custom threshermen. Branches in every agricultural center back you up.

Write for booklets, "It Saves the Grain" and "More for Less." They tell the whole story.

THE HUBER MANUFACTURING COMPANY, 445 Center St., MARION, OHIO

Makers also of the Huber Tractor

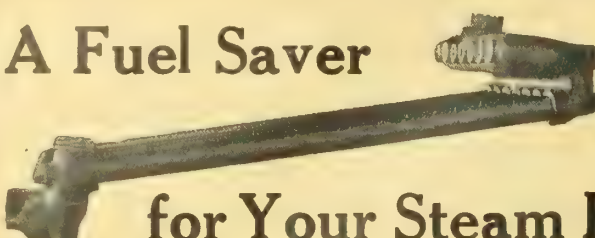
Branches:	Harrisburg, Pa.	Lansing, Mich.	Indianapolis, Ind.	Peoria, Ill.	Wichita, Kans.	Crowley, La.
	Des Moines, Ia.	Lincoln, Neb.	Minneapolis, Minn.	Fargo, N. D.	Canadian Branch: Brandon, Man.	



The Huber Western Special

COUNTERBALANCED straw racks reduce vibration, yet provide the utmost agitation. Pitmans on the outside provide more room inside. The 12-bar cylinder with a adjustable concaves does good work under every condition. Double belts with automatic tighteners are always at the right tension.

A Fuel Saver



Guarantee
The Tubular Arch is warranted to be made of good material, and to stand 200 pounds working pressure.

for Your Steam Engine

Here's an arch which possesses marked superiority over the conventional brick arch. It gives a greater generating area, provides a roomy fire box, makes an easy steamer, and, contrary to the brick arch, which requires replacing at short intervals, its firmness guarantees absolute stability and long service.

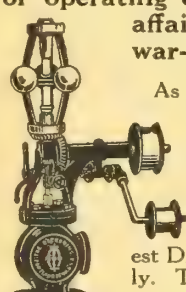
With the Tubular Arch installed in your boiler you can fire with any kind of fuel, straw, wood or coal, and save from 25 to 40% on your fuel bill.

Stop burning up good, hard earned dollars. Investigate these claims.

The Gugisberg Tubular Arch Co., St. Peter, Minn.

NEW PRICES

Following a long-established policy of showing our customers every consideration, in return for their loyalty and patronage, we have recently reduced prices on the old reliable Pickering Governor, thus helping to bring about a lower cost of operating one's engine and return to a normal state of affairs generally—following the demoralization of war-time conditions.



As a matter of fact, production costs thus far do not warrant taking this step, but we are hoping that by increasing the volume of our business, we can effect economies proportionately, which will offset temporary losses.

Let any who—thus far—have postponed replacements of Governors, write us, describing their engines, and we will gladly outline proposed assembly and refer them to nearest Distributor, assuming they may prefer to place their orders locally. This plan would involve no obligation and yet permit our demonstrating familiarity with needed assemblies for their reassurance.

The Pickering Governor Co., Portland, Conn., U. S. A.

Birdsell Clover and Alfalfa Hullers Never Wear Out They Last a Lifetime



WE sell hundreds of Birdsell Hullers yearly—many go to new owners—many go to old Birdsell owners who want to change hullers for the latest improved type. Seldom do we find a discarded Birdsell Huller and if we do the history of that machine will tell that it was handled and cared for in a careless manner.

There are hundreds of Birdsell Hullers more than 40 years old—still running.

There's a Good Reason

Birdsell Mfg. Co., South Bend, Ind.

Points About Clover

BY TIMOTHY PARSON

A WEST VIRGINIA man, not long ago, retired from the coal business and took up the work of the worn-out farm on which his father had largely had yellow pine and sumach. He shipped in manure from the stables at nearby mines, applied liberal quantities of lime and phosphate, and sowed a mixture of grasses and clovers on his most promising fields. Now he raises fine hay and his whole farm is in good shape. Clover has done the business.

Southern farmers have long known the value of red clover as a source of feed and seed revenue. In many sections of the northern states its values are often overlooked.

Medium red clover is the most valuable and most widely grown clover. It will produce two crops, one for hay and a second crop for seed. There are other clovers, however, which must not be neglected.

Alsike is a clover which will grow on soils more "acidic" and more poorly drained than those required by red clover. Mammoth clover will produce one good crop a year on light, sandy soil, so the man who has found his stand of red clover rather thin will do well to investigate mammoth clover. Its rank growth renders it none the less valuable as hay. White clover, a perennial, is the salvation of certain sections where a pasture stand is hard to get.

The hay experts of the University of Wisconsin have suggested some seed mixtures for hay and pasture which we give herewith. In reading this advice it is well to bear in mind that, on sandy soils where clover has not been grown, inoculating the seed is a good policy.

The left-hand column gives the purpose and conditions to be kept in mind, the right-hand column the mixture.

(1) For hay on well-drained land where clover is a sure crop and where mammoth clover does not grow too rank.	6-8 lbs. red or mammoth clover. 6-8 lbs. timothy.
(2) For hay on land where red clover fails in spots.	3 lbs. alsike. 4 lbs. red clover. 6 lbs. timothy.
(3) For hay where red clover fails on low flat bottom land.	4-6 lbs. alsike. 6-8 lbs. timothy.
(4) For permanent pasture on well drained land—may be cut for hay first year after seeding.	6-8 lbs. blue grass. 6 lbs. timothy. 6 lbs. red top. 3 lbs. red clover. 3 lbs. alsike. 2 lbs. white clover.

In connection with these mixtures, the following advice is given.

"The rates of seeding will vary. The greater the care used in preparing the seed bed and the more favorable the soil conditions, the less the amount of seed required. Sown alone, ten to twelve pounds of red and mammoth are generally sufficient. Alsike with its much smaller seeds may require from eight to ten pounds of seed an acre. For safety in securing an even stand of hay, the use of clovers in combination with timothy is desirable. On some soils where red clover is not a certain crop the use of a combination of alsike and red clover with timothy will insure greater success than pure red or mammoth clover.

"The permanent pasture grasses, blue grass and red top, require from two to three years to establish a good sod, a fact which makes it advisable to include timothy, red clover and alsike to be cut for hay the first season after seeding.

"The proper cutting state for clovers is when the blossoms begin to turn brown. The hay is allowed to remain in the swath until well wilted, when it should be raked, preferably with a side delivery, into windrows where the curing is completed. It can then be loaded with a hayloader with little loss of leaves. In the event of rain, turning the windrows with the side delivery rake hastens the drying. Where the labor situation permits, curing clover in cocks gives an excellent quality of hay."

The Invention of the Gas Burner

BY EARLE W. GAGE

It was a well-worn and needle-punctured thimble used in substitution for a piece of clay to stop the flow of gas that gave to the world its first gas burner. The thimble suggested the idea to William Murdock, whose little cottage in Redruth, Cornwall, England, where he lived in 1782, has become known as "the cradle of gas lighting." His first attempt to make gas was in an iron teapot. Later he distilled coal in a kettle and led the gas through pipes.

In the old days at Redruth, when making gas in his back yard and burning it in his office, to the wonderment of the rustics of the neighborhood, who were utterly unable to comprehend there being the possibility of a flame without a wick, Murdock first burned his gas simply as a flame from the end of the gas pipe, and when he wanted to cut off the gas his method was extremely simple.

Taking a small plug of clay, Murdock rammed it into the end of the pipe. You must remember that he had only just begun to experiment, and he was not at all certain what would happen if the small holder in the back yard was to ground and the pressure of the weight of the holder was to be taken off the gas. Murdock had some sort of dim fear that there might be a dis-

turbance; at one of his exhibitions he suddenly saw his flame beginning to grow small, and he realized that his holder in the yard was getting low.

He looked around for his plug of clay to cut off the light, but unfortunately(?) that plug of clay had been knocked on the floor and had rolled under the table. Unable to find the plug, Murdock hurriedly looked around for a substitute, and found his wife's thimble. Seizing the thimble Murdock rammed it over the end of the pipe, but, smelling the gas, he applied a light and saw that the thimble was in the condition that every good housewife's thimble should be—it was full of holes drilled

by the unsympathetic heads of darning needles, and the gas escaping through these small holes ignited, and to his utter astonishment, Murdock saw that those two or three small jets of gas gave greater illumination than the open one-inch pipe.

Following out the idea, Murdock introduced the Cockspur burner. He thought that three jets, which to his mind rather represented the Prince of Wales's feather, and which were called the Fleur-de-lis burner, would prove a great improvement, and so he welded together the end of the gas pipe and drilled out small holes, and had as a result what became known as the Coxcomb burner.

A Weight for the Hay Stacker

BY G. G. MC VICKER

NEARLY all types of hay stackers require a weight to start the fork on its downward journey after the load of hay has been deposited on the stack. The frequently found type of weight for this purpose is a box into which earth is placed for the necessary weight. But with this type, after being knocked about for a couple of years it loses a part of its weight and because of its size and shape, it is unhandy to work around or to handle.

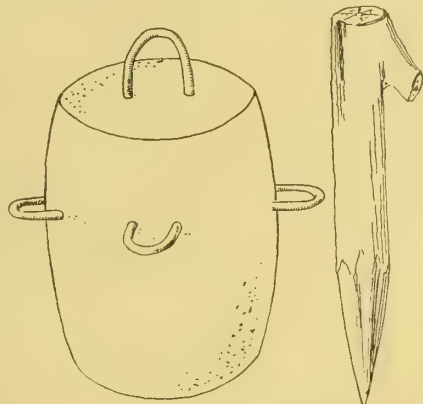
A very good substitute for this type is one made of concrete and formed by placing the wet mixture of sand and cement in an empty nail keg. To make up a part of the weight and save cement, bricks or pieces of scrap iron may be added.

To form a place in which to attach the lifting rope a U-shaped one-half-inch rod is formed and cast in the weight before the mixture sets.

A like loop placed in each of four sides of the weight makes the most handy place for carrying the stakes which are used for holding the stacker to the ground when at work. The most practical kind of stake to use is one cut from apple ash or other hard wood, allowing a short part of a side branch to be left on. This forms a hook which may be placed over the runner of the stacker

as the stake is driven. With four of this type of stakes no chains or ropes need be used to hold it down.

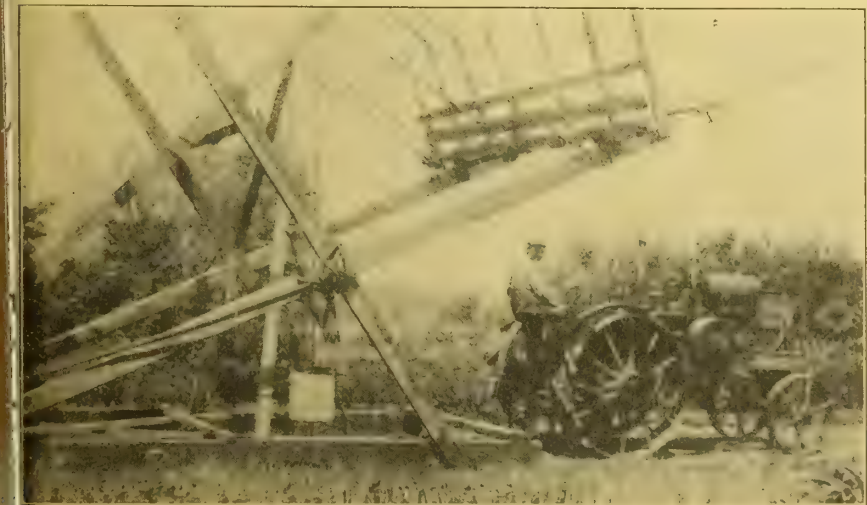
The weight I have mentioned requires little work or expense in the making. While improving the stacker by making a new weight, one might examine the runners, to learn if a better method of hauling the stacker could be found. Most



An Old Keg Helps.

farmers find that a stacker works best with its runners flat on the ground. However, a pair of trucks can be made, with slight expense, that will carry the bulk of the weight and yet not interfere with the setting of the stacker.

Any overhauling or improvements of the stacker, made during the spring months, will be repaid tenfold when the rush begins.



Note the Weight Hanging on the Stacker.

Prominent Manufacturers Approve



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SCIENTIFICALLY REFINED MOTOR OIL

The Oil of a Million Tests

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Since the inception of the motor En-ar-co Motor Oil has kept pace with motor development. En-ar-co engineers follow the trend of the motor just as closely and just as carefully as the makers themselves.

These Tractor Manufacturers Approve En-ar-co Motor Oil

Name of Tractor	Summer	Winter
Sandusky	Heavy En-ar-co	Heavy En-ar-co
Bates Steel Mule	Extra Heavy En-ar-co	Heavy En-ar-co
Liberty	Extra Heavy En-ar-co	Heavy En-ar-co
Twin City	Extra Heavy En-ar-co	Heavy En-ar-co
International	Heavy En-ar-co	Heavy En-ar-co
Mogul	Heavy En-ar-co	Heavy En-ar-co
Titan	Heavy En-ar-co	Heavy En-ar-co
Moline Universal	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Avery 5-10	Heavy En-ar-co	Heavy En-ar-co
Avery Motor Cultivator	Heavy En-ar-co	Heavy En-ar-co
Avery 8-16 and larger	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Eagle	Extra Heavy En-ar-co	Heavy En-ar-co
Allis-Chalmers 18-30	Extra Heavy En-ar-co	Heavy En-ar-co
Big Pull	Heavy En-ar-co	Heavy En-ar-co
Parrett Model H	Extra Heavy En-ar-co	Heavy En-ar-co
Fox	Heavy En-ar-co	Heavy En-ar-co
Turner Simplicity	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Kardell Utility	Heavy En-ar-co	Heavy En-ar-co
E-B	Heavy En-ar-co	Medium En-ar-co
Wellington	Heavy En-ar-co	Heavy En-ar-co
Hart-Parr	Extra Heavy En-ar-co	Heavy En-ar-co
Wallis	Heavy En-ar-co	Medium En-ar-co
J. T.	Extra Heavy En-ar-co	Heavy En-ar-co
Rumely Oil Pull	Heavy En-ar-co	Heavy En-ar-co
Russell	Heavy En-ar-co	Medium En-ar-co
Toro	Heavy En-ar-co	Heavy En-ar-co
Victory	Medium En-ar-co	Medium En-ar-co
Shelby	Extra Heavy En-ar-co	Heavy En-ar-co
Cletrac(Spring) Med. En-ar-co	Extra Heavy En-ar-co	Light En-ar-co

These Motor Manufacturers Approve En-ar-co Motor Oil

Name of Tractor Motor	Summer	Winter
Waukesha (Gasoline)	Medium En-ar-co	Medium En-ar-co
Waukesha (Kerosene)	Heavy En-ar-co	Heavy En-ar-co
Erd	Extra Heavy En-ar-co	Extra Heavy En-ar-co
Le Roi	Heavy En-ar-co	Heavy En-ar-co
Beaver	Heavy En-ar-co	Heavy En-ar-co
BULLDOG	Extra Heavy En-ar-co	Heavy En-ar-co
Hinkley	Heavy & Extra Heavy En-ar-co	Medium En-ar-co

En-ar-co Motor Oil has been approved for use in all makes of Automobiles and Trucks—which is your insurance against expensive repair bills.

En-ar-co Gear Compound—Best for gears, differentials, transmissions. White Rose Gasoline—Pure, clean, powerful. National Light Oil — for Tractor fuel, also lamps, stoves, incubators.

Send the coupon for the fascinating Auto Game—FREE. Get this game. It's full of fun and interest. Every member of the family will enjoy playing it. It's free—use the coupon.

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B-730 National Building, Cleveland, Ohio
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EN-AR-CO—Auto Game FREE!

The National Refining Co., B-730 National Building, Cleveland, Ohio
Enclosed find 2-cent stamp to partially cover postage and packing. Send En-ar-co Auto Game. I have never received an En-ar-co Game.

My name is..... St. or R. F. D. No.....

Postoffice..... County..... State.....

I own a..... My Dealer.....

(Auto or Tractor) located at..... cannot supply me. Quote prices on:

.....gallons White Rose Gasoline.....pounds En-ar-co Gear Compound.

.....gallons En-ar-co Motor Oil.....pounds Black Beauty Axle Grease.

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Durable, Powerful, Reliable, Massive. Built to last; to do hard, heavy work. Uses Cheapest Fuel. Pull 1/2 to 1 horse-power more than rated. Lowest Prices. 3 Months Trial. Easy Terms. Sizes 1 1/2 to 22 H.P. Easy to start. No cranking. No batteries. 10 Year Guarantee. Most practical engine ever built. Engine book free. A postal brings it.

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Lagging Machine
That will do the Work



Fits any pulley from 2 to 14 inches, beveled or straight face. It is made especially for threshermen or for use in any industry where pulley lagging is necessary.

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**Foremost Among
Better Grinders**

Crush and grind all the grains that grow. Fine for hogs or moderately coarse for cattle feeding.

Strength, durability and service radiate from every line of these powerful mills. Simple but effective in adjustment. A strictly high grade piece of machinery for the farmer or miller.

Light Running—Long Life—Extra Capacity
Cone-Shaped Grinders

It pays well to investigate.
10 sizes: 2 to 25 H.P. or more.
Write today for FREE catalog.

THE A. N. P. BOWSHER CO.
SOUTH BEND, IND.

Boys and Girls

Little Rain

When I was making myself a game
Up in the garden, a little rain came.

It fell down quick in a sort of rush,
And I crawled back under the snowball bush.

I could hear the big drops hit the ground
And see little puddles of dust fly round.

A chicken came till the rain was gone;
He had just a very few feathers on.

He shivered a little under his skin,
And then he shut his eyeballs in.

Even after the rain had begun to hush
It kept on raining up in the bush.

One big flat drop came sliding down,
And a lady-bug that was red and brown

Was up on a little stem, waiting there,
And I got some rain in my hair.
—The Atlantic Monthly.

A Miser and the Bank Note

BY TROY WATSON LEWIS

(Apology to Gay)

"Cents, like sense, cannot both
Be hoarded and enjoyed."

A decrepit old Miser awoke out of a deep slumber with a shudder of fear. It was long past the hour of midnight. The window shutters of his low rambling house were rattling and swinging to and fro in the teeth of an ominous gale. Out of the inky darkness frequent splashes of cold rain rattled through the lilac bush swaying near his grease grimed window. Each succeeding gust of wind sent a cold and clammy uneasiness through his shriveled soul. Springing, at last, from his bed of straw the Miser tip-toed about his room, trembling before every sentinel-like object in constant fear of being clutched by some unknown outstretched hand. He tried with hasty fingers each bolt and lock in quick succession; each dark object and silent curtain he as carefully explored. Then with bated breath he crept with a listening ear to each crack through which whistled the fitful wind until, at last, satisfied no prying eye or lurking form sought to rob him of his hoarded wealth, he breathed a sigh of relief.

Drawing a golden key from the folds of the dingy robe which covered his withered breast the Miser softly opened the treasure-chest and, with trembling frame and hollow eyes, knelt before the glittering gold, allowing the cold metal to clank through his bony fingers while the bank notes curled about his shriveled hands.

Ere long he was seized with a new fear and his pleasures again were quickly broken. Fickle misgiving softly laid her icy fingers upon his heart. Crying aloud in this new fear he wrung his hands and beat upon his breast. Staring into the deep darkness, while laboring under the lash of a guilty conscience, thus his rasping voice from the cavern recess of his shrunken soul de-claimed:

"Had the world never given up
her treasured gold this troubled

heart of mine would have known the blessings of peace; this aching brain free from the fires that night and day torment it. But, alas! virtue has been sold for a few grains of precious metal. What price, oh tell me, can recompense the cruel pangs of vice? Cursed money! thou art a cheat and a fraud! Murderer of good, and all that is noble in man, thou art! Can the frailties of mortal man defeat thy base and cunning power? Well knowest thou that, through thee, snares are set in the pathway of man that he may be quickly swallowed up in thy cunning! Thou hast, cruel money! banished honor from mortal mind and left but a hollow name. Thou hast sown the world with the dragon's teeth of every ill; thou first taught man, man's life to take with a murderous thrust; thou hast instructed the heart of cowards to become adepts in human treachery; thou hast mothers made their own children slay and maidens their virtue sell for a song! O who can sum up the mischief thou hast done? Alas, alas! virtue resides on earth no more!"

Thus lamented the sobbing soul of the Miser while trembling and alone in the darkened room before his gold. From the eastern window, slowly wavering to and fro, see a light, a phosphorescent gleam, slowly taking form of a Bank Note and yet with the semblance of man—an apparition! wavering across the room toward him through the inky darkness. Behold! the god of the Miser. Quickly the chest was closed and firmly locked with the golden key. The Bank Note approached the crouching form, frowned upon the Miser, and in an angry voice thus rebuked him:

"Whence all this vile and slanderous billingsgate against me, your god? Did I, base and ungrateful wretch, corrupt you or any other man? The faults of which your slanderous tongue has told are locked within your own grasping and narrow soul. Think you that because my blessings are by some low minded men abused that I must be vilely slandered before all the world for their own greedy sins? Base and ungrateful wretch you are! Know you not that sweet virtue is even made the unsuspecting cloak under which thieves of freedom and liberty ply their cursed trade, and that out of the power thus lodged in their possession will arise a nation in but the yoke of bondage? Naught but cankered gold contains the breast of that man who would thus fill his coffer or his purse. Know you not that the bitter dew sucked up in its daily labor by the busy bee turns

but quickly into honey? and that his store of yellow wealth is but a blessing to all mankind? Money is not a curse. In the hands of virtuous men and women it is like that sweet mercy which droppeth from heaven: It blesseth both he that giveth without guile and he that receiveth for honest value. Money, when rightfully used, is quick to hear the hungry cry of orphans and the midnight sobs of the widow. It wipes the tears from the eyes of forlorn youth; warms the palsied frame of a wasted man, and robes the sore afflicted in fresh linen!"

The apparition wavered a moment after this torrent of words then slowly fluttered through the darkness toward the eastern window. "Mark you this," it said in passing, "the Miser who pawns his sordid soul for money can profit nothing by laying his dark crimes at the door of honest Bank Notes!"

From Our Boys and Girls

DEAR AUNT JANE:

May I join your circle? This is my first letter to you. I live on a farm of about twenty-five hundred acres. I have two sisters and two brothers. My sisters' names are Irene and Ada Mae. My brothers' names are Clarence and Maurice. Irene is six years old and Ada Mae is four years old, Clarence is eight years old and my baby brother is two. My papa takes The American Thresherman and Farm Power. I am ten years old. Clarence and I go to school every day. I am in the fourth grade. Clarence is in the first grade. For pets I have a dog named Shep and a Pup named Dewey. Papa has nine horses and a jack. I will send you a picture of all of us on the horse. This will do for this time and I hope to see this letter in print.

Your nephew,

RAYMOND MOLRY.

Logan, N. Mex.

(Thanks for the picture, Raymond.—AUNT JANE.)

DEAR AUNT JANE:

We are subscribers to The American Thresherman and Farm Power but I have never seen any letters from this part of the state. Our family is one of the old pioneer families. We live on a ranch of cockle burrs. We have a good bottom farm but the children all go to high school so the farm has grown up in cockle burrs. When children get through high school they don't want to go back to the farm. They all want jobs where they can keep their nails polished and wear kid gloves so they won't get blisters on their hands, and sit by and let the mother do the work. There are thirteen of us in our family and I am one of the oldest. If it wasn't for dad having a little ready cash and me raising chickens, we would all be



Bigger Crops

a certainty if you adopt the most up-to-date method of seed grain treatment in the world—use

FORMALDEHYDE
The Farmer's Friend

This powerful disinfectant positively destroys all seed grain smuts and growth, and prevents flax wilt, also scab and black-leg of potatoes. Rids stables, kennels, chicken houses of disease germs and flies. Endorsed by the U. S. Dep't of Agriculture. The best Formaldehyde bears the Perth Amboy Chemical Works' Label—at your dealer, with complete directions. Farmers' Hand Book FREE on request.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK



RUSTSOLVO

THE PRODUCT WITH OVER A THOUSAND USES

You Are Losing Hundreds of Dollars and Several Days' Use of Your Implements Each Year

If you knew how to stop this loss you would do it, wouldn't you? Statistics show that Metal Rust costs the average farmer \$300 or more per year in lost time and cost of replacing broken parts; plus several days' use of his implements during the busy season when most needed.

RUSTSOLVO will save over 90% of this loss and give you several days' additional use of your implements

How many times have you broken important machine or automobile parts by trying to start a rust-bound bolt or nut? How many days have your machines stood idle waiting for new parts—and often in the busiest season? Use RUSTSOLVO and prevent these delays that mean an actual loss of a great many dollars.

Just squirt a few drops of RUSTSOLVO out of the handy can on the rusted part and let it penetrate to soften the rust. It will do this without injuring the metal, and the bolt, nut or part can be taken off without trouble.

RUSTSOLVO saves time, work, materials—when you need them most. That means money.

RECOMMENDED

Ask your County Agent or Farm Adviser about RUSTSOLVO or write your State Agricultural College, Farm Bureau or Grange. RUSTSOLVO has been tested and is in use on experimental farms of many of the State Agricultural Colleges and many of the farms of Grange and Farm Bureau members. Endorsed by them and progressive farmers everywhere.

GUARANTEED

RUSTSOLVO is just as important in repair work as a set of good tools. We know what it has done for others. We know what it will do for you. Every can of RUSTSOLVO is guaranteed to give you satisfaction. See for yourself how much time and trouble it saves. Your money back, if you are not thoroughly pleased.

TEST IT YOURSELF

RUSTSOLVO is a free-flowing, non-inflammable liquid that cuts rust, carbon, red or white lead, shellac, paint, tar, dried grease or green corrosion on batteries. Has over a thousand uses. Does not injure the hands, metal, rubber, wood or cloth. You will want a can for every tool box on implements, tractors and trucks.

If your dealer does not carry RUSTSOLVO, put your name and address on the coupon, mail it to us, and we will send you a full pint by prepaid parcel post. You have choice of enclosing \$1.00 or paying on delivery. Act today and save yourself money.

THE RUST PRODUCTS COMPANY of America
64 East Lake Street, Chicago, Illinois



A Few of the 1200 Uses of RUSTSOLVO on the Farm

Good Wherever Metal Parts Are Stuck From Rust, Carbon or Friction

PLOWS—For freeing Bolts and Nuts; changing or adjusting Points, Moldboards, Landsides, etc.

MOWING MACHINES—For freeing Cutter Bar, Main Axle Bearings, Main Wheel, Hubs, Levers and Pivots, Double Gear Shaft, Crank Shaft, Piston.

BINDERS—For freeing all-metal adjustable parts—Frame, Platform, Knotter, Wheels, Transport, Elevator, Dividers, Bundle Carriers.

AUTOMOBILE, TRUCK, TRACTOR and GAS ENGINE—For freeing Taper Pins, Valve Cages, Piston stuck from Rust or Carbon, Spark Plugs, Pet Cocks, King Pins, Steering Knuckle Pins, Shackle Bolts and Nuts, Brake Anchor Pins, Clevis Pins, Brake Band Stud Bolts, Brake Rods, Emergency Brake, Body and Fender Bolts and Nuts, Radius Rods, Exhaust Manifold Bolts and Nuts, Studs, Caps, Water Jacket Nuts, Spring Clip Bolts and Nuts, Wheels from Axle, Tire from Rim, Battery Terminals, stuck from green corrosion, Pulleys and Keys.

HOUSEHOLD—For placing in good working order Sewing Machines, Door and Window Hinges, Casters, Water Cocks, Door Locks and Keys, Window Locks and for removing rust in general.

PIPE FITTING—For disconnecting Flanges, Elbows, Tees, Collars, Joints, Faucets, stuck from Heat, Rust, red or white lead, graphite, brine.

PRINT name and address with SHARP PENCIL to insure prompt delivery

The Rust Products Co., 64 E. Lake St., Dept. A-1, Chicago

I wish to take advantage of your special introductory offer on RUSTSOLVO. Please send me a full pint can by prepaid parcel post.

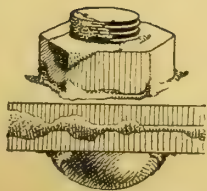
I enclose P. O. Money Order for \$1.00. } Mark out one line.
Send the package C. O. D., \$1.00.

Also send free booklet on RUSTSOLVO USES.

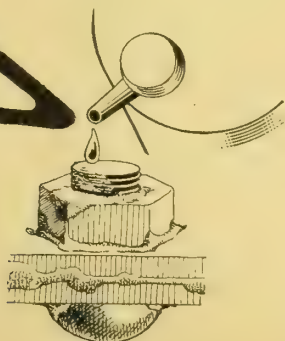
NAME.....

R. F. D. or ST..... TOWN.....

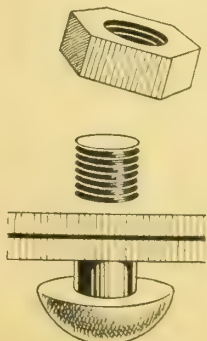
STATE.....COUNTY.....



Rust-Bound Bolt



Apply RUSTSOLVO



Comes Apart Easily

1921 APRIL 1921

Sun Mon Tue Wed Thu Fri Sat

1921 MAY 1921

Sun Mon Tue Wed Thu Fri Sat

1921 JUNE 1921

Sun Mon Tue Wed Thu Fri Sat

1921 JULY 1921

Sun Mon Tue Wed Thu Fri Sat

1921 AUGUST 1921

Sun Mon Tue Wed Thu Fri Sat

1 2 3 4 5 6

7 8 9 10 11 12 13

14 15 16 17 18 19 20

21 22 23 24 25 26 27

28 29 30 31

Learn Now

Pay in August

Money is a little scarce now. We know it as well as anyone. It's mighty difficult to get hold of the good old greenbacks. However, things are picking up and money will soon again flow more freely.

To "tide over" until then and to speed up the enrollment in our Gas Tractor Course, we offer a special plan of deferred payment, which removes the financial obstacle and enables anyone interested to take up the work now.

The regular price of our Gas Tractor Course is \$30. Our plan is this: Pay us \$5 down to indicate that you mean business, then pay the \$25 balance on or before August 10.

Did you ever hear of a more liberal proposition?

We agree to teach you an interesting profession, which is certain to increase your yearly income. We'll teach you how to successfully operate a gas tractor, how to locate trouble and how to make your own repairs. And we're willing to take our pay next August when you've mastered the course and will be in position to cash in on your knowledge and training.

You can't afford to pass up this special offer. You want to fit yourself for a better paying job. You have the time, for all you need is your spare hours. The work is given by mail. And the deferred payment plan enables you to handle it financially.

Write for more particulars. Do it today. The offer expires May 1.

Clarke School of Traction Engineering
Madison, Wisconsin

drinking cockle burr soup. I will send a picture of the whole family if I see this letter in print.

Your nephew,
CARL SOBIESKI.

Kildare, Okla.

(You must have good luck raising chickens, Carl. Write us how you care for them, what you feed them and the breed you raise.—AUNT JANE.)

DEAR AUNT JANE:

I am a little boy from Georgia and I have never seen a letter from this state. I am ten years old and go to school at Gold Mine. I am in the fourth grade. The schoolhouse is just across the road from my home. I have two sisters and two brothers. Their names are Mary, Merle, Glen and Frank. Little Merle is just one year old and is learning to walk. I have a big shepherd dog and a little

grade. I go to town school. We have two and one-half miles to go. I have only stayed home nine and one-half days. I have blue eyes and I am four feet and three-fourths inches in height and have blond hair. As I do not get many letters, I wish some of the cousins would write to me.

Your niece,

Your niece,

FLORENCE ANDERSON.

Walnut Grove, Minn.

(We're glad to hear from **you** Florence. Why not write to some of the cousins first? I'm sure some of them will answer—AUNT JANE.)

DEAR AUNT JANE:

I have never seen a letter from Warren County so will write a few lines. I live on a two-hundred acre farm. I am a girl eleven years old and am in the seventh grade. I take domestic science and like it very much. I just love to cook. I have a



"All of Us, on the Horse!"

This is a picture of "all of us, on the horse." If you want to know who "all of us" are, read Raymond Molry's letter, in this magazine.

motherless calf that I feed on a bottle. Papa has a store and I like to clerk for him. He also runs a sawmill, grist mill and a planer.

Your nephew,
J. C. BAGWELL, JR.

Rovston, Ga.

(What sort of things did you sell to people when you helped your papa in his store?—AUNT JANE.)

DEAR AUNT JANE:

I have just finished reading one of the letters in *The American Thresherman and Farm Power*, and I want to write and see if my letter will be put in print in the paper before it reaches the wastepaper basket. I have four brothers and one sister. My brothers' names are Clarence, Oscar, George and Walter. The oldest one is twenty. He is in the navy. He has been in the navy for two years and he has to be in two years more. He was home last summer and it was his birthday while he was home. They had a party on him. Some of the neighbors made a cake for him. It was made like a ship and it was all decorated. I am twelve years old and in the sixth

brother named Joe, aged fourteen. and a sister named Gladys, who is eight. For pets I have a rabbit named Starlight, a cat named Tooties, and a colt named Queen. Papa takes The American Thresherman and Farm Power and I do enjoy the Children's Page.

Your niece,

THELMA SHAFER.

Pinevillage, Ind.

(What do you learn to cook in your domestic science class, Thelma? —AUNT JANE.)

DEAR AUNT JANE:

I read The American Thresherman and Farm Power and like to read the Children's Page. I have a saddle horse and ride him after the cattle and horses. I like to ride very much. We live east of the Judith mountains and they look very pretty in a change of weather. They look as if they were coming nearer all the time. I am nine years old and am quite big for my age. Your niece,

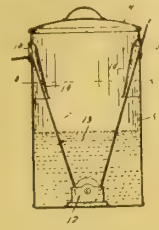
Novary, Mont. ADELL COOK.

(Would you rather have a saddle horse than an automobile, Adell?—AUNT JANE.)

New Patents

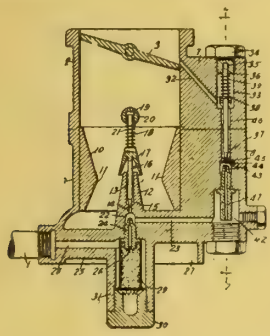
Things of Interest to Power Farmers

BINDING TWINE ATTACHMENT.
A cover equipped liquid-holding tank, a pair of twine guide-eyes in the



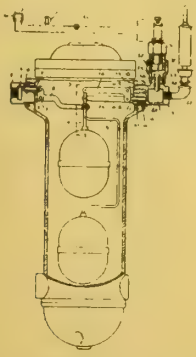
sides of the tank above the liquid level, and splash shield extending below and over said guide-eyes.—Patented by Dewey E. Thompson, Dawson, Minnesota.

CARBURETOR.
A carburetor comprising a casing having a skirt, and a bar extending transversely of the skirt, said bar having a fuel inlet and a feed chamber and provided with a main jet extending into the casing and with a downwardly extending tubular projection into which the inlet opens, an auxiliary jet opening into the feed



chamber and tubular projection, a filtering device secured to the auxiliary jet and extending into the tubular projection, a closure for the tubular projection, a spring pressed bell in the casing above the main jet and carrying a needle valve working in said jet, and a butterfly valve in the casing.—Patented by Gaspare Mezzatesta, Hampton, Virginia.

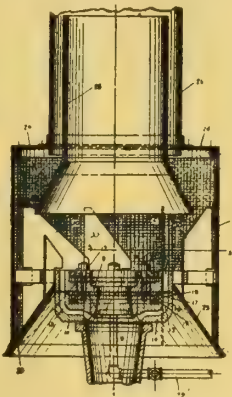
WATER COLUMN FOR BOILERS.
In a water column for boilers, the combination of a nipple mounted in said column and provided with a chamber and apertures from said chamber to said column, two float actuated valves in such apertures,



a casing mounted on said nipple and having connection with said chamber, a piston mounted in said casing and adapted to be operated by admission of fluid pressure to said

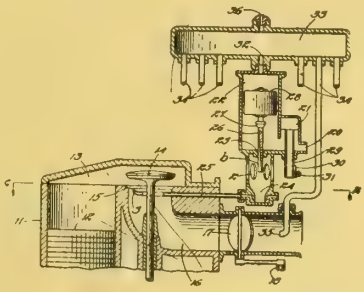
chamber, electrical contacts in said casing adapted to be bridged by said piston in one position, and an exhaust conduit for such fluid pressure, said conduit mounting a fluid pressure actuated alarm.—Patented by Albert N. Miller, and David W. Frackelton, Cleveland, Ohio.

SPARK ARRESTER.
The combination of an exhaust nozzle; a smoke flue alined therewith and spaced therefrom; a rotatable tubular screen, having an unobstructed interior, bridging the inter-



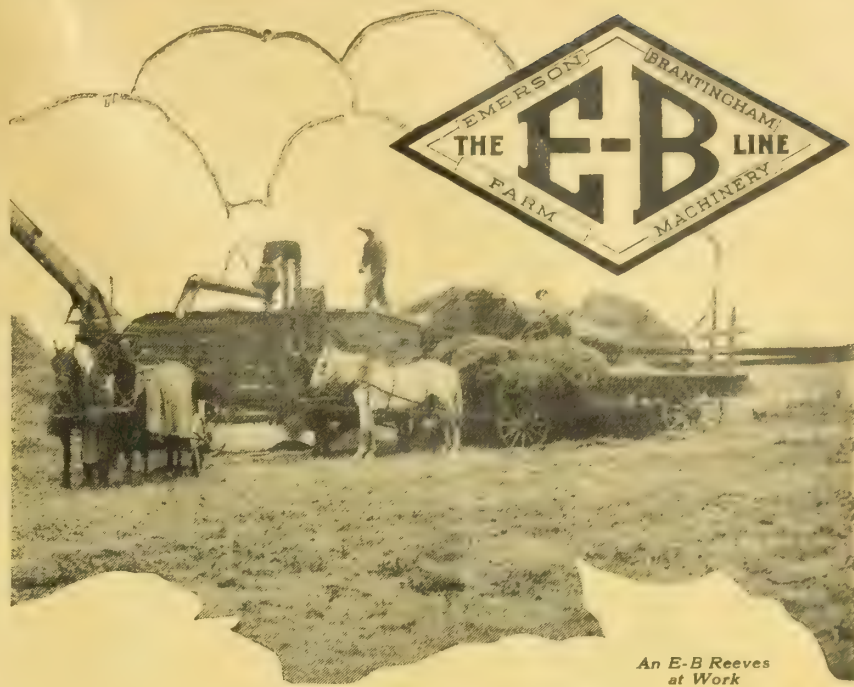
val between said nozzle and flue; bearings for said tubular screen; and a motor for rotating said screen.—Patented by Archibald Hastie Dick, Schenectady, New York.

FUEL SUPPLY MECHANISM FOR ENGINES.
The fuel supply mechanism for an internal-combustion engine which comprises a fuel pit, means for supplying fuel to the fuel pit in a continuous flow while the engine is running, means for injecting into the



engine the fuel which has accumulated in the fuel pit between successive strokes of the engine, and regulating means responsive to variations in pressure in the air intake of the engine to vary the flow of fuel to the fuel pit.—Patented by Stephen Ivan Fekete, Detroit, Michigan.

“Aren’t you afraid America will become isolated?”
“Not if us farmers keep raisin’ things the world needs,” answered Farmer Corntossel. “The feller that rings the dinner-bell never runs much risk of bein’ lonesome.”—*Washington Star*.
Russia’s finance commissioners have been directed to prepare a plan for the abolishing of money. They haven’t far to go.—*Chicago Tribune*.



An E-B Reeves Outfit Pays You Profits Year After Year

The thresher that pays is the one that saves grain and stands up under years of hard usage. Read what Collins & Trosing, Pelican Rapids, Minn., say about this:

“The E-B Reeves outfit we bought of you has saved a lot of grain for the farmers around here. We have more work than we can handle and get more threshing every year. We haven’t had more than one breakdown in three seasons and that only cost one dollar and fifty cents. So we can’t say too much for the Reeves 15-bar separator.”

The E-B Reeves Thresher has a wonderful record of performance. Its light-running qualities, its large capacity, its thorough cleaning and its ability to get all the grain has made every user an enthusiastic booster. We would like to send you our latest literature on this thresher.

Emerson-Brantingham Implement Co., Inc.

Established 1852 Rockford, Illinois
A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company

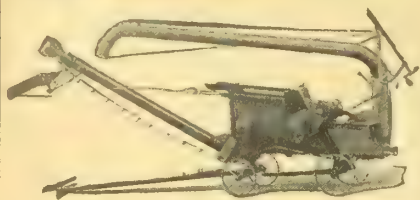
MAIL THIS COUPON
EMERSON-BRANTINGHAM IMPLEMENT CO., INC.
Rockford, Ill. (At)
Gentlemen—I am interested in threshers. Please send me literature and information about the E-B Reeves Thresher. Yours truly,
Name _____
Address _____

Mention The American Thresherman and Farm Power

Use a
“STUTZ”
Steel Thresher Tank
and eliminate your tank troubles. We also manufacture oil and gas tank fuel tanks. Quality guaranteed.
Catalog and prices free on request.
Star Tank Company, Goshen, Ind.

Mention The American Thresherman and Farm Power

EARN BIG PROFITS



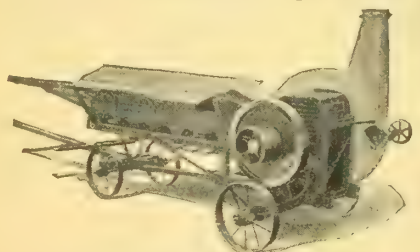
WITH

ROSENTHAL

CORN HUSKER and SHREDDER

Made in four sizes to suit power and requirement.

FILL SILOS QUICK



ROSENTHAL

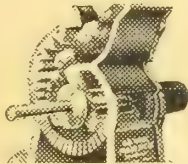
ENSILAGE CUTTER and SILO FILLER

Made in three sizes

Write for Catalog and Prices

ROSENTHAL CORN HUSKER CO. MILWAUKEE WIS.

Mention The American Thresherman and Farm Power



Limestone Pulverizers

Sold direct from Factory to Farmer
Write for catalog
O. B. Wise Pulverizer Co.
Knoxville, Tenn.

Mention The American Thresherman and Farm Power

Wanted—

5000 Threshermen to sell

Buller Automatic Couplers



Our experience in the past has proved that the thresherman is the best salesman for the Buller Coupler. The simple reason is that he can't keep still about the coupler after he has used it.

Many threshermen have told us that they had sent in orders for their neighbors. These were threshermen who were using the Buller Coupler and told their neighbors about it, and the result was that the neighbors asked them to order the couplers.

Now, Mr. Thresherman, here is your chance. Write us today for terms, prices and discounts.

Remember our couplers are all sold on 10 DAYS' TRIAL. Money refunded if not absolutely satisfactory.

Buller Coupler Co. Hillsboro, Kansas

Buller Automatic Coupler

Mention The American Thresherman and Farm Power



STREISSGUTH-PETRAN ENGRAVING COMPANY
West Water & Wells Sts. Milwaukee.

Uncle Silas

IF bread is the staff of life, hardtack must be the crowbar.

THE pawned opportunity is very seldom redeemed.

IF you can't afford a riding habit, girls, you'll have to keep in the habit of walking.

NEVER give up as long as there is a ghost of a chance until you give up the ghost.

IF we lie ourselves, we judge others from the viewpoint of the liar. Sorter think this over, Ezra.

EVERY time a man undertakes to drown his troubles, he seems to think that they are all located in his belly.

ONE of the strange things of life is applauding the villain in the play for doing the things for which we would arrest him in real life.

OF course if a man has nothing to do, and nowhere to go, he can afford to sit down and argue with a woman, otherwise no, Adaline, no!

STANDING on one's dignity won't get one very far. We are liable to be sitting on it before we realize the fact.

THERE are two things in this world of ours that are easy to accumulate, poor relations and empty tomato cans.

NOW, honor bright, did you ever rave over a woman who was a great and shining light in a literary club? Honor bright, did you, Ezra?

IF you will resolve to be good humored when you rise in the morning until the clock strikes ten, you won't have much trouble in getting along the rest of the day.

WHEN a sorrowing soul is in the shadowland of tears, it welcomes a hearty laugh and a warm hand-shake. The smile is the rainbow that whispers hope to the troubled soul.

WHEN folks went courting in the old days, their thoughts wandered to red apples down the lane; now they set their hearts on red lobsters going down red lane.

THE way of the "bootlegger" is no asphalt pavement over which to glide these days, and whoever pays six dollars a pint for "White Mule" is a simp and deserves to get moon-eyed.

OF course money will buy foreign titles, but the average American girl who has backed her millions against the frazzled out counts, finds herself counted out, with the worst of the deal when the divorce courts have settled things up.

THERE are the gypsies who camp along the roadside and while the men swap horses and occasionally swipe a chicken or a few cooking apples, the women folks separate the gullible from their sheekles just as slick as Peter's heel, by reading the future from a deck of cards, or by other forms of mummery. They toil not, neither do they spin, excepting threads of imagination which they twist into ropes for haltering the unwary, and still Solomon in all his glory was never arrayed in as many colors of the rainbow as some of these ballyho broods of the hedges and highways of life.

Barnum once hired a sculptor to secretly hew him a mighty man of stone from the quarries somewhere in New York between Tonawanda and Ticonderoga. After this stone, which the builder thought he was making for naught, had been duly polished and made to look like a pre-Adamite human, it was buried for a time until it could be properly exhumed under the title of the Cardiff Giant, "discovered in the wilds of Africa, purchased at an enormous price, transported across the ocean by special steamer chartered by the great and only Barnum," that his patrons might view this pre-historic wonder for the meager sum of twenty-five cents.

Between Barnum and the gypsies folks used to feel relieved at times when they would otherwise have been despondent. Barnum and the gypsies have had their day but there are others who take their places, only they play the game in a more up-to-date way.

Better Belts— Better Work!

Belts on all kinds of farm power machinery can be kept working hard many hours a day without slipping and without being tightened.

CLING-SURFACE

is a combination of "food" elements that revitalizes the worn tissues in a belt or rope, and enables it to carry full load running slack.

CLING-SURFACE penetrates every fibre of a belt and lubricates them, banishing harshness and grating and making the belt mellow, pliable and cohesive. It has been in universal use for over 25 years.

Write for details of our Trial Offer.



CLING-SURFACE CO.
1070 Niagara St. BUFFALO, N. Y.

Mention The American Thresherman and Farm Power

Liberty Grain Blower

Fan mill and elevator combined, at half the cost of an elevator. Loads into box car, wagon or bin. One man and gasoline engine does the work of three men without shoveling or lifting.

Elevates, Airs, Cleans

scours and polishes wheat or oats, making it test higher and bringing a better price. Light, durable, easily moved. Particulars free.

LINK MFG. CO.
Dept. X
Kansas City Mo.

Mention The American Thresherman and Farm Power

Time to Insure

Farm machinery, uninsured, is a risk too great for any one man to carry.

Pass it on to us. Put the burden on our shoulders. Eighty years in the farm insurance business have made us strong and secure. There's a million dollars back of us.

A policy with us protects you against loss from fire, lightning, windstorm or tornado. It leaves you without responsibility.

We operate in all states and have adjusters right on the job. Write for particulars.

1841 *Security* Insurance Co.
NEW HAVEN, CONN.
Western Department Rockford, Ill.
WALTER D. WILLIAMS, Mgr.

Mention The American Thresherman and Farm Power



Making Road Funds Go Further

The "Caterpillar's" field of usefulness is by no means limited to road work. On farm and ranch, in the mining, oil and lumber industries—wherever power and endurance are at a premium, the "Caterpillar"* has no real competitor*

Cost figures prove that the Holt "Caterpillar"* Tractor can be used profitably in more phases of road work than any other method or machine ~ That's why hundreds of new "Caterpillars"* are getting into action this spring on road work all over the country ~ Used singly or in fleets, the savings a "Caterpillar"* will effect are enormous ~ Because of its speed, power, flexibility and endurance, "Caterpillar"* supremacy is solidly established for all kinds of road work ~ Now is the time to act ~ The road funds you can save with "Caterpillars"* this season will more than pay for the equipment ~ Write, telephone or wire for further information.

CATERPILLAR
Reg. U.S. Pat. Off.

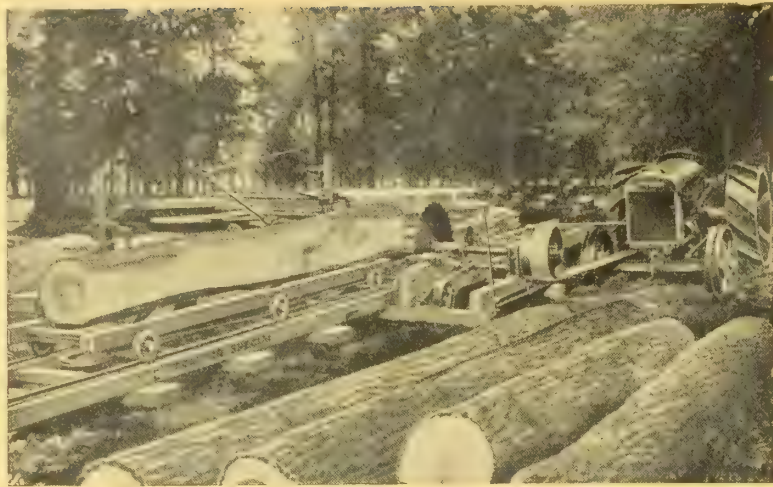
HOLT

PEORIA, ILL.
STOCKTON, CALIF.

**There is only one "Caterpillar"—Holt builds it. The name was originated and is owned exclusively by this company. Infringements will be prosecuted.*

THE HOLT MFG. CO., Inc., PEORIA, ILL.
Branches and service stations all over the world





SAW YOUR OWN LUMBER!

Supposing you have timber on your farm, and that you have a tractor that develops 10 horse power or more at the belt, and that you are considering the erection of some buildings. All you need to produce good lumber is an

ENTERPRISE "TRACTOR SPECIAL" SAW MILL

Just the mill for light power. Saws logs 30 inches in diameter and smaller, up to 16 feet long. Makes all kinds of lumber right on your own place. Backed by our long experience of forty years in saw mill machinery; and the price is right! Write today for full particulars.

THE ENTERPRISE COMPANY

1050 Main Street
COLUMBIANA, OHIO

Minneapolis Office
120 3rd Ave. North

136 Liberty Street
NEW YORK, N. Y.

Oil or Gasoline Tanks

Welded Seams
No Rivets to Leak
Tested with Air

Our Wagon Tanks have Bolsters which fit Standard Farm Wagons. Smaller sizes are made to carry in wagon box.

Niles Steel Tank Co., Niles, Mich.

1, 2 or 3 Compartments



This hood uses the blast from the wind stacker to clean the dirt out of the straw. It builds better stacks by allowing the air current to pass through while the fingers drop the long, clean straw on the stack without blast. The straw falls in such a way that a perfect stack is the result. The fingers are made of properly shaped, oil tempered steel and are securely fastened, so the straw is easily dropped. Straw is worth more now than ever before, and it is up to the farmers to save it. Every thresherman who equips his machine to save straw is sure of more profits.

OIL-RIGHT LUBRICATORS

More arms and legs have been torn off and more men killed around the threshing outfit while oiling than in all other kinds of threshing accidents combined. The OIL-RIGHT absolutely prevents these accidents. This oiling system does not merely oil one or two bearings but it may be used to oil the entire machine. As many extra feeds may be used as desired.

We also furnish GRAIN SAVING STACKERS complete at a real saving to you. Write for particulars and price.

LINK MANUFACTURING CO. KANSAS CITY, MO.

Emergency Hay Crop

(Continued from page 8.)

Varieties such as the Ito San, Medium Early Black and Medium Early Green are among the best. They can be cut early, at a time when the weather is best for hay making. Seeding broadcast or drilling in at the rate of four or five pecks an acre is a good method when growing soybeans for hay, because the plants are finer stemmed when grown under these conditions. However, they may also be drilled in cultivated rows. By using a special soybean plate and setting the wheels of the corn planter forty-four inches apart, rows twenty-two inches wide can be made by straddling every other row. From twenty to thirty pounds of seed an acre are required for row plantings. Everything considered, the first method is preferable. Seeding should be delayed until about corn planting

time. A week or so later is still better.

Soybeans make the best hay if cut when the blossoms are fading and the pods are forming. In order to save the leaves, the most valuable part of the crop, the plants should only be allowed to wilt well in the swath. Then they should be put up in small cocks and left to cure, which usually takes about a week in good hay-making weather. Although peas and oats or Sudan grass may give larger yields, the high protein content of soybean hay is a big advantage. The soybean, being a legume, has the special advantage of enriching soil with nitrogen, provided the seed has been inoculated. Instructions for inoculation can be furnished by all agricultural colleges, and often the cultures can be obtained from them at cost.

Organization Notes

(Continued from page 22.)

Doctor Chas. Loffler of Des Moines, and W. Penn Jones of Minneapolis responded;

The visitors were next called upon for a few words. The following responded: President H. C. Gildemeister of Minnesota, and Secretary H. T. Gens of Minnesota.

B. B. Clarke was unable to attend and J. B. Parker spoke in his stead.

The proposition of organizing an Accident Insurance Company was discussed and explained by the officers of the Brotherhood.

The Lien Law was then talked over. Meeting adjourned till 1:30 P. M.

Afternoon Session.

Called to order by president.

Moved and seconded that the regular yearly convention of the South Dakota Brotherhood of Threshermen be permanently located in Sioux Falls, South Dakota.

Meeting then proceeded to regular Fire Insurance Company meeting.

At the close of this meeting it was moved and seconded that the Brotherhood of Threshermen have a tent on the state fair ground at Huron this fall.

Report of legislative committee by H. F. Borneman.

The resolution committee submitted the following, which were all adopted:

1.—Be it resolved that we voice our appreciation of the courteous treatment which we have received from the city of Sioux Falls and the people in it.

2.—Be it also resolved that we thank the newspapers of this city for the large amount of publicity they have given this brotherhood, prior to and during this meeting.

3.—Be it also resolved that we extend a vote of thanks to the advertisers and exhibitors for their cooperative spirit and their activities during this and all previous meetings.

4.—We wish to especially thank the companies who donated their different articles to be sold at auction.

5.—Be it also resolved that we extend our thanks to J. B. Parker and The American Thresherman and Farm Power for their assistance during this meeting, and wish to extend an invitation to them and all others to be present next year.

H. C. WALLACE,
W. A. SWARK,
Auditing Committee.

South Dakota Brotherhood of Threshermen. W. A. SWARK,

Secretary.

The Kansas Threshermen's and Farmers' Association was launched at Wichita, February 24, 1921. This association hopes to serve the men who find it inconvenient to attend

the Topeka and Oklahoma City meetings.

J. B. Parker, representing the National Association of Threshermen, came to Wichita by request of W. H. Newsom, president, to assist in the organization of this new body.

A meeting of the threshermen and farmers was called for the evening of February 24 and nearly one hundred and fifty men assembled at the Board of Commerce Rooms. A most enthusiastic gathering was held. It recalled the exciting days when Wichita was the mother of thresher conventions.

Mr. Joseph O'Leary, president of the Wichita Thresher and Tractor Club, presided and opened the meeting by stating briefly the object of the gathering. His remarks were right to the point and he drove home to the boys what a thorough sectional organization would mean to them. He then introduced Mr. Parker, stating why he had come to Wichita. Mr. Parker in his remarks explained what the organization had accomplished in the nineteen states that had already been organized; he explained fully the importance of a Wichita convention to Kansas, stating that the time was not far distant when the threshermen and farmers would be practically legislated off the roads unless more men became interested in these protective associations. There is no question about what would be the case if the proposed highway and vehicle laws were enacted.

Mr. Parker mentioned the success and saving of money in states where the threshermen had their own insurance companies. He appealed to every thresherman present to become a member of the association. He was followed by Mr. McIntyre, of the

Used by 5000 Threshermen 3000 Tractor Owners

The hard oil you have been looking for. Made from Pennsylvania steam cylinder oil, lard and tallow. One consistency only—medium hard.

Color dark green. Takes the place of all kinds of hard oils and greases in all kinds of compression cups. Cools any troublesome bearing and keeps it cool. Unequalled for high speed or low speed work. How about that crank pin on the engine or the main bearings on the sheller?

In order to give every one a chance to test this wonderful hard oil we will mail a one pound box to any machine user for \$.25 post paid.

Write nearest office

BALSO OIL COMPANY

Council Bluffs, Iowa

Toledo, Ohio

Illinois Thresher Company, who spoke from a manufacturer's standpoint, explaining fully why the manufacturers were interested in the organization work in every state. He stated that whatever was beneficial for the threshermen surely was a direct benefit to the manufacturer; they prospered as threshing conditions are improved. He also made an earnest appeal that every thresherman in the audience join the association. His remarks were stirring and were well received. At the close he asked every thresherman who was in favor of an organization, to rise. Everyone present arose.

In a short time the organization was completed and by unanimous vote the name of the organization was adopted as the "Kansas Threshermen and Farmers' Association" and the following officers were elected: Jerry Dunkelberger, Newton, Kansas, president; O. L. Siler, Garden City, Kansas, vice president; C. A. Hatton, Wichita, Kansas, secretary-treasurer.

The officers were sworn in by Mr. Parker. Mr. Dunkelberger was escorted to the chair and stated that while he did not in any way seek the office, he would do everything in his power to make the association a success.

The attendance at Wichita consisted largely of threshermen who live south and west of Wichita. These men were aided in every way by the Wichita machinery men, who recognize the need of a central meeting place for the threshermen of the Arkansas and Cimarron Valleys.

C. A. HATTON,
Secretary.

Is Lime a Belt Treatment?

BY W. F. SCHAPHORST

A practice that should be discouraged among belt men is the usage of lime on oily belts. It is thought by some belt men that nothing is equal to lime for absorbing the oil and rendering the belt fit to do its work. Under oily conditions, however, almost any dry powder will make a belt pull better—anything that will absorb the oil. A non-corrosive powder, however, should rather be used, such as chalk or fuller's earth. But, better still, don't use any pow-

der at all. It harms, rather than benefits, a belt.

In emergencies it is often considered good practice to "do anything in order to get out the work," but that does not imply that we should keep on doing it year after year. If oil continues to spatter on the belt the belt man is bound to have more or less

trouble right along, and he must keep on using this harmful expedient. Naturally, the belt won't last long under such severe conditions. The best treatment for an oily belt is to stop the oil spattering first and then keep the belt in good pliable condition.

I know of no circumstances where

oil throwing cannot be stopped. After that is done I would wash the belt clean of the oil and then fill it full of the best belt treatment obtainable. Do not use castor oil, neat's-foot oil, boiled linseed oil, etc. Use a treatment that is made specially for belts by a responsible manufacturer.

Humane Extension Feeder

(Patent Applied For)

Made in 16-Foot to 40-Foot Lengths for Any Size Machine



This is a 32-foot Humane Extension Feeder

IT is really a HUMANE EXTENSION FEEDER. The dusty separator can be set back from the stacks so the pitchers have clean work. With bundle wagons, headed either way, the horses need not be driven up to the dusty machine or close to the dangerous belts. Being long and low down, my men had easy pitching. The grain was easy to get into the Feeder, none of it fell out or went over—all of it went into the separator, and without clogging or choking at the feeder knives. I have always felt an interest in the welfare of my men and my studies of how best to help and protect them have resulted in the perfection and development of the HUMANE EXTENSION FEEDER.

Our short Extension Feeders are made to meet the demand for a cheap feeder and we use the same patented ribs, renewable floor and truck design, as on our longer feeders. My experience is that the 28 or 32-foot Extension Feeder is the most practical in every way. The 24-foot and longer Feeders are made in two sections with our patented truss and cantilever construction, making them extra strong and convenient for shipping and shedding.

E. D. RICHARDSON

What Our Satisfied Customers Say:

"We think your Humane Extension Feeder the best in the neighborhood. Cannot send you enough words of praise. Works splendid; easy to move around and attach to machine. Wheat never falls out of feeder for pitchers. It feeds machine nice and even. Four men will easily pitch as much as six men to other feeders, therefore it saves the labor of two men. Everyone around here praises them highly." Respectfully yours, Soderlund Bros., Kanona, Kans.

"The Humane 32-foot Extension Feeder that I bought of you last year is the best feeder I ever saw. It will feed any kind of grain to perfection. I had no trouble keeping men. I used four men and they stayed with me from the time I started till I finished, when other threshers had trouble keeping men. If I couldn't get another Humane Extension Feeder, I wouldn't take \$500 for mine." Yours respectfully, C. M. Buttermore, Woodston, Kans.

January 19, 1921.
"About the 32-foot Humane Feeder which I purchased of you, I can say I am more than pleased with it.

It saved me two men all last fall's run, which more than paid for it. You will find me a booster for the Humane Extension Feeder." Yours truly, F. W. Beedy, Agra, Kans.

January 20, 1921.
"In regard to the Humane Extension Feeder we bought last season, I wish to say that we are well pleased with it. Also the pitchers and farmers were well pleased with it. The amount of labor saved will soon pay for it. We would not do without one after using the Humane Feeder." Respectfully yours, H. C. Doebrman & Co., Natoma, Kans.

January 26, 1921.
"After using one of your Humane Extension Feeders, I am thoroughly convinced that my money has been well spent. My feeder paid for itself in less than 20 days. It saved two men, that meant \$1.40 an hour saved. I think it to be the only real extension feeder on the market today. It is a labor saver and a money maker. I would not thresh without one." Yours respectfully, C. A. Wineinger, Alton, Kans.

January 18, 1921.
"The Humane Extension Feeder we bought of you is surely a great labor and grain saver. I am sure I would not think of threshing without using the Humane Feeder." Yours very truly, Peter J. Palen, Glen Elder, Kans.

January 25, 1921.
"The Extension Feeder I bought of you last fall is the best I ever saw work. It saved three men with my machine because it is low and easy to pitch to and to move around. Would not do without one." S. A. Wright, Aurora, Kans.

February 24, 1921.
"In regard to the feeder we purchased of you last fall. We used it 80 days on our 28-inch machine and it saved us the price of one man, or a sum of \$560. It did a better job of feeding than the old feeder." Yours truly, Gregory & Slagle, Alton, Kans.

Proving That Our Statements Regarding the HUMANE FEEDER Are True

Write for full description and prices today, stating length of extension feeder wanted, width of cylinder and make of self feeder used. Order early and we will be sure to deliver on time.

Manufactured by

E. D. Richardson Mfg. Co.

Cawker City, Kansas

Mention The American Thresherman and Farm Power



The Thirteenth Annual Iowa Threshermen's Convention Passed without a Mishap.



For the Hard-to-Please

We like to meet the men who are hard to please in their belting purchases.

We like to meet them because we are confident that Atlas is the belt for them.

Every dollar invested in Atlas Stitched Canvas Belts is well spent. It will be returned in good and satisfactory work.

If you have a hankering for more for your belt money, order Atlas the next time—direct or through your dealer.

Acme Belting Co.
Manufacturers
Niles Michigan

Mention The American Thresherman and Farm Power

The Conquest of the Machine

BY EDGAR L. VINCENT

IT fell to me to own the first grain drill that ever was brought into our neighborhood. When we first went on the farm I sowed all my grain broadcast and harrowed it in with an old-fashioned butterfly drag. This soon gave way to a modern spring-tooth harrow, which we used and found to be a great improvement. But the grain drill appealed to me and I ordered one.

Before the machine came, indeed before my order was sent, a widow living some three miles from our place, one of the progressive kind of women, learned that we were going to have a drill and she wanted one, too. So I sent in her order as well as my own. I had a boy sixteen years old, and the widow of whom I speak had one a few months older, and the two were great friends.

I was away on business when the drills came at the station eight miles away. They were to be shipped "knocked down," to be put together after reaching the farm. The boys talked it over and made up their minds they would get those drills and put them together. So they hitched up, drove the eight miles, got the machines on the heavy lumber wagon, brought them home and set about putting them up.

The boys had their mothers to help them out, and they wrestled with those machines manfully. They perspired a lot before the job was done, but they stuck to it and got everything together all right. Now the question was, "Will it work?" So they put some grain in the box, hitched on, and away they went. You never saw happier boys than those were when they found that they had mastered that machine and that it actually was putting in grain. After I got home, my boy had to show me how it was done. By that time the oats were beginning to come up. I will say that there were some balks, but they had done a good job, and, what was more, they knew when the machine was in good working order and how to doctor it if anything went wrong, which, I must admit, was more than I could do.

Now, that is what I call the conquest of a machine. For my own part, I doubt whether any man ever gets the good work, the wear, the real service he should out of a machine of any kind, unless he has in some such way mastered the mechanism of the machine. It would be a great help to the farmer if he could see all his farm tools in the "knock down" and have to set them up, or to watch somebody else carefully while he did it. Then he would have a proper idea of the working of every piece, know when it is right and what it is intended to

do. Then if he is a careful, ingenious man, he could add years to the life of his machine, and get better service out of it.

If he understands the purpose of the various parts of his machines and has the ingenuity to adjust them all properly and to make necessary changes in case any piece is broken, he can save himself a good deal of money in the course of the year. I know men who are so helpless when anything goes wrong with their machines that they have to send away, often a long distance, to get an expert to help them out. The trouble may, in fact, be very simple and easily dealt with by a man who knew his machines.

Men and boys that set themselves about it may do many little jobs of repairing themselves, without having to call upon either the carpenter or the blacksmith. A neighbor of ours rarely has to call for help, unless some metal part is broken beyond recovery. He goes at it and mends the damaged piece.

Then, too, boys are a great deal more independent if they are given the opportunity of studying the machines on the farm and learning to operate them. We men folks cannot always be at home. There are times when the boys must run the machines if they are to be operated at all. It puts new fire into the boy's heart and adds much to his manliness, to have father say, "I must be away to-day, but I know you will work the binder just as well as I would if I were home. Go ahead. Be careful. You know how to handle the machine. You will be all right."

It may be that not all of the boys will stay on the farm as long as they live. Shall we given them machinery to handle? Surely. No matter what they do in after life, it will be good for them to understand machinery and its operation. The better mechanic a boy is, the more successful he will be in later life. The faculties that are brought into play and which must be developed in the performance of good farming will stand the boys in good stead when it comes to other and different kinds of work in the shop, in the office, in the store. I would not hesitate to say that the man who has never handled machinery will see the day when he will stand helplessly in the presence of some accident and say, "If I had only learned how to deal with machines when I was on the farm, I could fix this all right. Now I cannot."

So let every farmer, every farmer's son and every farmer's girl learn to master all possible machines. It will be a blessing to you sooner or later.



No More Leather Covers or Belt Dressing

When you are getting your rig in shape for this season's threshing, why not put on a Vacuum Non-Slip Pulley and forever do away with expensive leather covering and belt dressing?

The Vacuum Non-Slip Pulley is made of cast iron, needs no covering, runs the separator up to speed, saves belt and power and is guaranteed to pull as well as a covered pulley—many users say it has practically no slip and pulls better and steadier than a covered pulley or any kind of pulley.

Why not write today for a circular fully describing this patent pulley and testimonials from users who have forever ended pulley troubles?

Vacuum Non-Slip Pulley Company
1811 Arcade Building
St. Louis - Missouri

YOU want the

most effective—most economical method of operating your belts, with the minimum of slipping—least wear on belts and bearings—greatest output from power generated. You have this if you lag your pulleys with

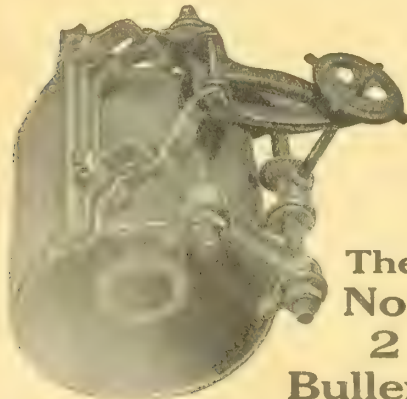


Washington Superior Pulley Covering

It wears a long time and keeps its belt grip until entirely worn from the pulley. Has been used by many progressive threshermen since 1902. Any careful man can apply it. Write for sample of fabric and prices today.

W. S. RAYMOND, Mfr.
708 Chicago Rd. Niles, Mich.

Mention The American Thresherman and Farm Power



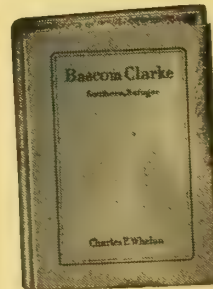
The No. 2 Buller

Lagging Stretcher

With this stretcher you can do a perfect job of covering your iron pulleys. It gets the lagging on very tight, thus insuring longer wear of the lagging. You can cover the cylinder of a vacuum separator without removing it. Sold on approval. Money refunded if not satisfactory.

Buller Coupler Co., Hillsboro, Kans.

Our Gift to You!



This splendid book—a big \$1.00 seller at the book stores—will be given free with a year's subscription to *The American Thresherman and Farm Power*.

One dollar puts your name on our mailing list for one year. The book is our gift to you.

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Madison - Wisconsin

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Madison - Wisconsin

The Soy Bean's Ten Commandments

BY TIMOTHY PARSON

I. I am the crop you have been looking for. You shall put no other crops before me. You will find I am a great hay for dairy cows. Breeding ewes which are fed on me as a diet will produce extra-heavy lambs. I show good results in thousands of head of stock which like me and keeps my commandments.

II. You need not use the richest soil for growing me; for I will grow in abundance in light soils.

III. Remember the soy bean, to keep it handy. Six years can you raise grains and draw strength from the soil, but the seventh (at the outside) is a year when you will want me to add nitrogen to the soil.

IV. Honor the silo and the hay-loft with my presence, that your days may be long upon the rich soil of the Middle West.

V. You will find stock like me.

VI. You will learn that I can "catch" on soils where other crops fail.

VII. You can plant me late.

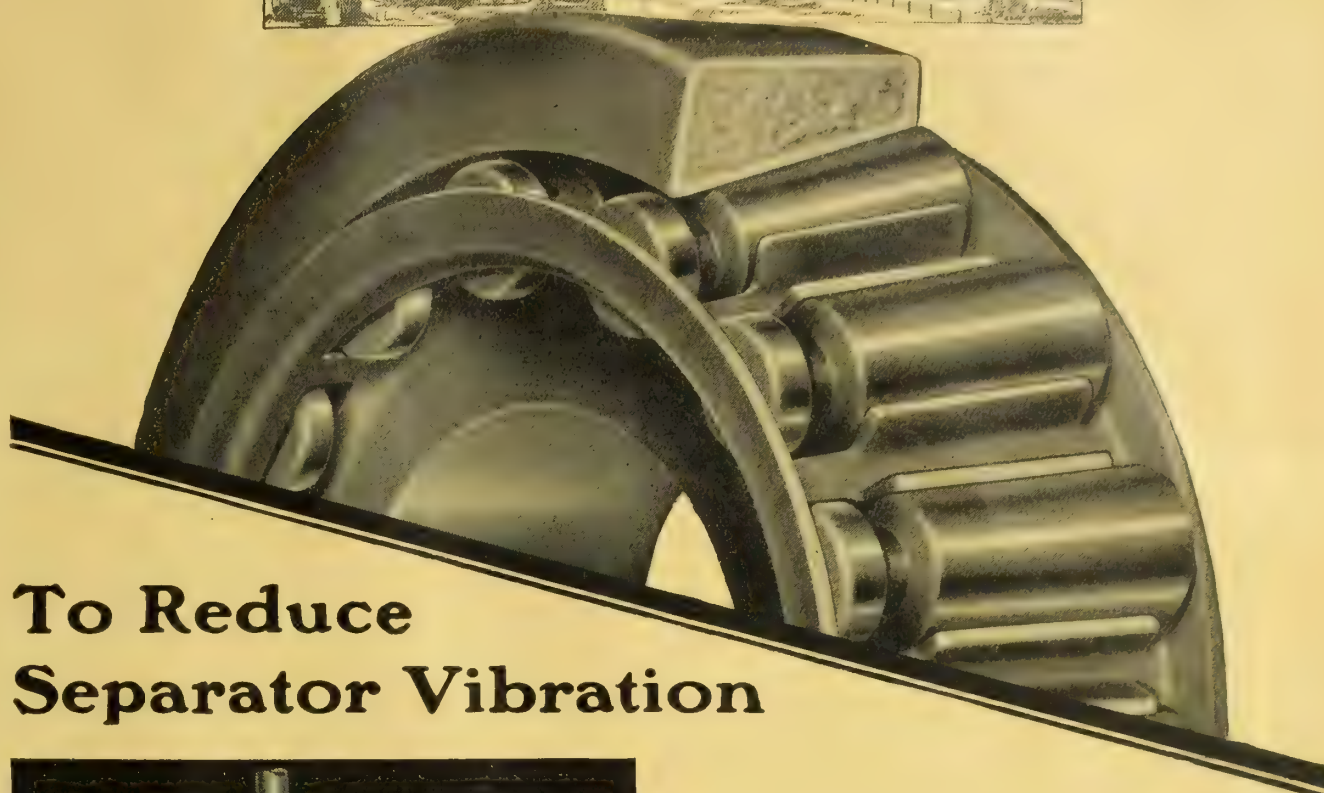
VIII. You will not find my balance on the wrong side of the ledger.

IX. You will not want a better hay.

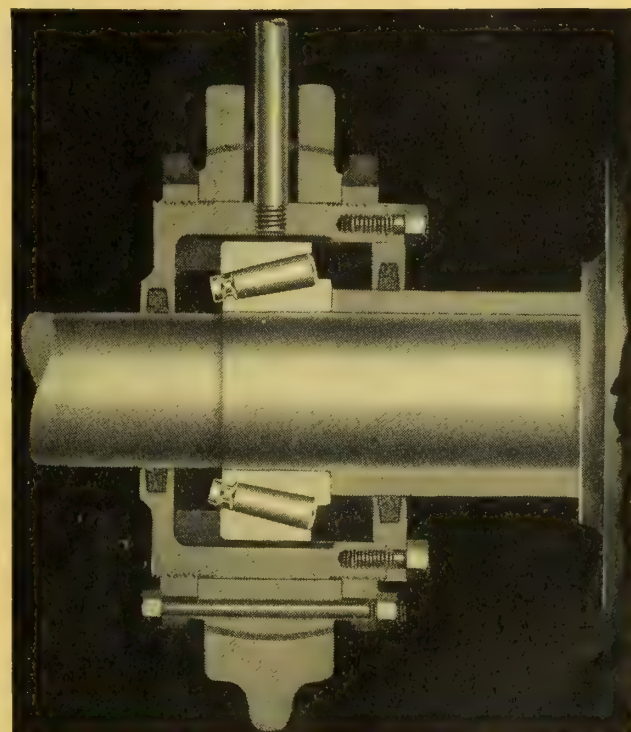
X. You will not ask a wider use of any crop. I am used for silage, green manure, hay, seed and pasture. You can't ask for more than that, neither can any of your neighbors.

One of the laborious jobs connected with silo filling is the tramping of the silage into the silo. It is necessary that the silage be thoroughly tramped if it is to keep well. Usually this work is done by men who keep the silage well distributed and continually walk on it. One Texas farmer informs us that he uses goats for this work. He puts a number of goats in the silo, when the work of filling starts, and drives them around and around, as the silage slowly is built up. Then he swings the goats down from the top of the silo with a block and tackle. Now we are informed there is a mechanical silage tamper on the market, driven by electricity, which walks around and around inside of the silo. This is one more example of the way in which mechanical genius is continually striving to keep the farmer from "being the goat," as far as the heavy labor of the farm is concerned. It is claimed for this machine that it will make possible the stowing of at least twenty per cent more silage at the first filling of the silo, than would be the case if the silage were tramped by a man.

TIMKENS MEAN - MORE and BETTER FARMING - BY POWER



To Reduce Separator Vibration



Cups and cones have a press fit in carriers and on shafts respectively; adjustment is secured through nuts which engage the threaded cup carrier

To insure smooth running, almost frictionless, vibrationless operation, year after year, more and more threshing machine designers are refining their separators to include Timken Tapered Roller Bearings on the cylinder and stacker fan shafts.

Their tapered construction means dollars to the thresherman; it allows for adjustability as against expensive replacement for the wear which *must* follow all motion.

The taper also makes it possible compactly to carry all loads; including the particularly heavy thrust loads set up by the driving belt.

The self-aligning feature of the bearing carriers insures truly-aligned shafts, even though years of hard service have warped or distorted the frame itself.

The Timken Roller Bearing Co., Canton, Ohio

Timken Tapered Roller Bearings for Tractors, Farm Implements, Trucks, Passenger Cars, Machinery, Trailers, and Industrial Appliances

Send for free booklet on "More and Better Farming By Power"

TIMKEN Tapered ROLLER BEARINGS

Ohio Hay Values

That rape pasture will successfully take the place of alfalfa and red clover as a forage for swine when neither of these two is available is brought out in tests at the Ohio Experiment Station.

In trials comparing the two forages there was but little difference in the number of days required by

the pigs on rape and those on clover to gain from seventy-two to two hundred pounds in weight. Both produced gains of approximately a pound and a half daily a head.

The total feed consumed, however, by the pigs on the rape was three hundred and eighty-four pounds for every hundred pounds of gain as compared with three hundred and

seventy on clover, showing that clover is slightly superior as a forage in that it replaces more corn.

Rape compares favorably in composition with alfalfa and clover and is particularly valuable for furnishing green feed through July and August. It is used by many swine growers throughout the entire grazing season.

For Sale and Want Department

If your engine is too small or somewhat worn, if you have a thresher, feeder, stacker, shredder, sheller, cream separator, baler, wood saw, farm land, or anything else that you would like to get rid of—

Let us help you sell it

A "For Sale" ad in these columns will put you in instant touch with thousands of men, among whom there is sure to be a goodly number who are anxious to buy just what you have to sell. You can also find just what you want if you will advertise your wants in these columns.

Fix up a little ad for the next issue and start things moving right away. Quick sales come from our "For Sale and Want Ads" and the cost is only trifling when you consider the service.

Twelve cents a word each month. Remittance to accompany order. Copy for this department must be in our hands by the first of the month.

POSITION WANTED

WANTED—Position as steam engineer, 1d, eight years' experience. Grand River, Ia.

HELP WANTED

SALESMAN WANTED—With auto, to call on farmers. Wonderful opportunity. State experience and territory. The McC S. Co., 221 E. 131st St., Cleveland, O.

SALESMAN WANTED—To sell oils, belting, hose, paint, varnish, to factories, mills, auto owners, stores, threshers; outside large cities. Excellent proposition. Paid weekly. O. L. Doty, Cleveland, Ohio.

AGENTS in every state to sell "The Gospel of Free Masonry," by Uncle Silas. Price \$1 a copy. Guaranteed to give entire satisfaction or money refunded. Proceeds devoted to charity. Address, B. B. Clarke, care Clarke Publishing Co. Madison, Wisconsin.

FOR SALE

FOR SALE CHEAP—Gaar-Scott 13-H. P. engine. Clyde Bell, Hoxie, Kans.

FOR SALE—Two Reeves separators, cheap. F. Geitz, Edgerton, Minn.

FOR SALE—Boiler makers' tools. Saw pits. Henry Olinger, Gilbertville, Ia.

FOR SALE—No. 1 Buckeye ditching machine. Edw. Korn, Anna, Ohio.

FOR SALE—Fordson tractor, first-class shape, \$350. D. B. Gray, Hull, Ill.

FOR SALE—John Deere engine gang. Wm. Mandler, Medina, N. Dak.

FOR SALE—New Waterloo Boy tractor. A bargain for cash. Box 596, Prairie City, Ia.

FOR SALE—20-H. P. Case traction engine, first-class order. E. L. Smith, Guston, Ky.

FOR SALE—Extension rims for 80-H. P. Case steamer. R. Thomas, Overbrook, Kans.

FOR SALE—One 50-H. P. Case engine, nearly new; will sell cheap. Charlie Cooke, Cleveland, Minn.

FOR SALE—Emerson engine plow, two-section, fourteen-disc and eight mouldboards. J. B. Nafziger, Harper, Kans.

FOR SALE—12-20 Emerson tractor, 1918 model. Carl H. Erickson, R. 1, Box 1, Oslo, Minn.

FOR SALE—32x54 Huber separator, in good condition. Geo. M. Smith, R. 3, Berea, Ohio.

FOR SALE—20-40 OilPull, used little, A-1 shape. Address S. J. Schauer, R. 6, Waukesha, Wis.

FOR SALE OR TRADE—160 acres prairie land in Stanley County, South Dakota. Chas. Wampshe, Long Grove, Ia.

FOR SALE OR TRADE—110-H. P. Case steam engine. R. E. Lee, Englewood, Kans.

FOR SALE—14-H. P. Advance steam engine, in fine shape. E. M. Brubaker, Prairie City, Ia.

FOR SALE—Case 50-inch stacker. Also used repairs for 15-H. P. Case. C. J. Klepper, Plainville, Kans.

FOR SALE OR TRADE—Ottawa D sheller. Want Ottawa C. Greiner Bros., State Center, Ia.

FOR SALE—80-H. P. Case engine, No. 18406. Wanted—A 65-H. P. P. H. Nutsch, Morrowville, Kans.

FOR SALE—40x62 Woods steel separator, complete, \$750. Frank Sykora, Windom, Minn.

FOR SALE—50-H. P. Case steam engine, 32x54 separator, complete. Chas. H. Petersen, R. 1, Libertyville, Ill.

FOR SALE—Ruth feeder, 36-inch, extra good condition, \$80. S. O. Severson, Waukon, Ia.

FOR SALE—33x56 Baker separator, run three seasons, A-1 shape. Grant Miller, Millersport, Ohio.

FOR SALE—20-40 Case tractor; 32x54 Case steel separator. Earl Nelson, Saffordville, Kans.

FOR SALE—15-30 International and one 12-20 OilPull, both in good shape. E. J. Host, Lake Geneva, Wis.

FOR SALE—15-H. P. portable engine, clutch pulley. Ben Alter, Box 92, R. 2, Argyle, Wis.

FOR SALE—32x54 Huber separator, complete, ready to run. Been run two seasons. Chas. Frazee, Newcastle, Ind.

FOR SALE—Heider 12-20 and Fair-Mor 12-25 kerosene tractor, in good shape. Henry Harms, Fairbury, Ill.

FOR SALE—Forty-inch Case feeder, run three seasons, \$75, first-class condition. Frank Schlosser, Minonk, Ill.

FOR SALE—Case 32 extension feeder, \$30; two roller mills, cheap. Eber Withrow, Wayne City, Ill.

FOR SALE—Buckeye No. 4 ditcher, Holt 30-60 Caterpillar, also Birdsell No. 6 huller. H. Lauterbach, Earlville, Ill.

FOR SALE—Rumely 25 steam; Russell 20; \$300 each. Wm. Vandere, Mendota, Ill.

FOR SALE CHEAP—1920 30-60 Russell tractor. Could use 25-Case engine. P. W. Kraemer, Parker, S. Dak.

FOR SALE—12-20 OilPull, new; 10-20 Fair-Mor, new. Inquire S. J. Schauer, Waukesha, Wis.

FOR SALE—30-60 Hart-Parr parts, Avery five-bottom plow. John G. McKallip, Plainview, Texas.

FOR SALE—30-H. P. Case engine, 23x36 Aultman-Taylor separator. Price right for quick sale. Owen Todd, Myron, Ark.

FOR SALE—Two 32x52 separators. Wood Brothers engine. Otto Tiemann, Hornsby, Ill.

FOR SALE—16-H. P. Gaar-Scott engine. Price \$350. One tender, \$30. Carsten Holdorf, Walcott, Ia.

FOR SALE—Reeves 13 compound. Also Hartley extension conveyor weigher. C. E. Fox, R. 8, Seymour, Ind.

FOR SALE—Extension rims, 60"x8" face. B. Hansen, Box 104, Lake Norden, S. Dak.

FOR SALE—Nash four-wheel drive two-ton truck, good as new. A bargain. J. E. Casebeer, R. 1, Poland, Ind.

FOR SALE—One 28x50 Case steel separator; in fine shape, belts good. Geo. F. Jeffrey, Kingston, Mich.

FOR SALE—Garden City feeder and secondhand feeders, all makes. H. M. Hardgrove, Madison, Wis.

FOR SALE—Two-inch charcoal iron boiler tubes at one-half the prevailing prices. Box 465, Bloomington, Ill.

WANTED—50-inch steel gearless wind stacker for Case separator. B. F. Buckingham, Prairie City, Ia.

FOR SALE—25-H. P. Pitts engine, Garden City wings, and parts for 36x60 Avery separator. A. Haggstrom, Cannon Falls, Minn.

FOR SALE—Gaar-Scott 25 engine; 36x56 Red River steel; Garden City feeder; out three years. Art Jones, Marquette, Nebr.

FOR SALE—33x54 Port Huron separator, complete, in good shape. Also one Frick sawmill No. 01, nearly new. Otto Wagner, Dexter, Mich.

FOR SALE—Seed potatoes, planter, farms, automobile trailer, truck, car, steam engines, plows. J. A. Loffelmacher, Fairfax, Minn.

FOR SALE—25-H. P. Huber engine, Rumely separator, 40x64, with Garden City wing feeder. Will sell separately. Fred Christensen, Tyler, Minn.

FOR SALE—Cleveland tractor with plow, nearly new; fine mechanical condition, guaranteed. Priced at a bargain. Everett Morris, Pontiac, Ill.

FOR SALE—All parts of Eclipse 8x10 engine except boiler. Everything nearly good as new. Joy Dietrich, Louisville, Nebr.

FOR SALE OR TRADE—One 12-H. P. Peerless engine and Eli hay press; in good running condition. Hollis Yates, Pleasant Hill, Mo.

FOR SALE OR TRADE—30-60 Fairbanks-Morse tractor and six-bottom self lift plow. James Knight, Keytesville, Mo.

FOR SALE—One 22-45 Aultman & Taylor tractor in A-1 condition, and six-roll Advance husker, at a bargain. Jacob Binder, Robinson, Kans.

FOR SALE—25-horse Case engine with cab, jacket and contractors tank. 40x62 Case separator, complete. All in good shape. A. C. Harris, Earlville, Ill.

FOR SALE—30-60 Huber tractor and eight-bottom Deere plow with stubble and breaker bottoms. A. A. Mettler, Emery, S. Dak.

FOR SALE—\$1350 tractor, new, \$500. Full particulars on request. Puritan Machine Co., 1601 LaFayette Blvd. Detroit, Mich.

FOR QUICK SALE—30-60 OilPull, \$800; 12-H. P. Rumely steam engine. Just right for small separators. Ready for service, \$300. W. E. Miller, Assumption, Ill.

FOR SALE—One twelve-foot Russell grader, nearly new; one twelve-bottom Reeves plow, hand lift; one 40-65 Reeves tractor, run about sixty days, in good shape. Sherman Hall, Hoisington, Kans.

FOR SALE—For thirty days—2½-H. P. standard make gasoline engine, brand new, \$75 spot cash. Old Sile's Bargain Counter, Care The American Thresherman and Farm Power, Madison, Wis.

FOR SALE OR TRADE—Moline four-cylinder; will trade 14-28 Avery and motor cultivator with planters for larger tractor. Arthur Priebe, Chamberlain, S. Dak.

FOR SALE—16-30 Rumely OilPull and one four-bottom OilPull, good as new. Price, \$1250. Geo. B. Cummings, R. 3, Box 35, La Porte, Ind.

FOR SALE—20 Advance, 20 return flue Avery, 16 Reeves, 36x58 Case separator, 36x60 Reeves. Frank Serrine, Granville, Ill.

FOR SALE—15 H. P. Case engine, Buffalo Pitts separator, tank, belt, etc. Ford roadster, \$235. J. L. Brooks, Miller, Nebr.

FOR SALE—One brand new 20-35 Twin City tractor with steering device. Price \$2900 f. o. b. car. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE—More bargains. Double Gaar-Scott 22-horse; Reeves 36x60 and drive belt. Price \$800. Wm. Vandere, Mendota, Ill.

FOR SALE—One 8-16 Mogul tractor, fine condition; two-bottom P & O plow. \$450 for quick sale. J. H. Kenney, 124 S. Capitol Ave., Indianapolis, Ind.

FOR SALE—One Illinois 3-4 plow tractor and Oliver three-bottom self lift plow, in first-class condition in every way, \$1350. Dewey Elliott, R. 2, Oxford, Ia.

FOR SALE—One Morris beading tool, two-inch flue. Want three-bottom tractor plow. John Gyte, Black Earth, Wis.

FOR SALE CHEAP OR EXCHANGE—Implements or hardware, one each C and D Heiders, also Titan, plows and disc. All new. Box 21, Loomis, Nebr.

FOR SALE—36x60 Advance separator, rebuilt, painted and striped. First-class condition. Bargain. Kenney Machinery Co., Indianapolis, Ind.

FOR SALE—New ten-foot Oliver tandem disc; 32x60 Avery separator, blower and feeder. All complete. A. W. Kadera, R. 1, Iowa City, Ia.

FOR SALE OR TRADE—30-60 Rumely OilPull in A-1 shape, for 20-H. P. steam engine or good touring car. Henry Luth, Jr., Box 33, Ravenna, Nebr.

FOR SALE—One 16-H. P. Pitts steam engine in good shape and one six-cylinder Apperson automobile, in good shape. Mrs. David Halliday, Shipman, Ill.

FOR SALE—Avery threshing rig; 36x60 separator, 20-H. P. engine, return flue, steel water tank. Price \$1550 cash. Edw. Donner, Oakville, Ia.

FOR SALE—Heineke self feeders (Ohio agency). 30-32 inch Garden City, 24-32 inch Ruth, 32 inch Heineke Improved crank shaft. A. C. Staffin, Sidney, Ohio.

FOR SALE—Case outfit. 50-H. P. steam engine, 32x54 separator with attachments. All good condition. Estate settlement. Albert Riggs, Lacona, Ia.

FOR SALE—25-H. P. Russell engine; Case 36x58 separator. All complete and in good condition. Fred Lipprant, Pontiac, Ill.

FOR SALE OR WILL TRADE FOR A good tractor—Southern Missouri, forty acres improved. Box 187, Oberlin, Kans.

FOR SALE—20-H. P. Port Huron engine; Russell separator, 33x54; No. 1 Birdsell huller, tank, belts, canvas. D. B. Kirkley, Lakeville, Ind.

FOR SALE—One 32x54 Aultman-Taylor separator, complete, good condition. Or will trade for 26-inch or 28-inch machine. Beer Bros., Golden, Ill.

FOR SALE—Three No. 514 rebuilt Bemiller sawdust blowers, complete, \$55 each. Sawmill Foundry & Machine Co., Belleville, O.

FOR SALE CHEAP—9-16 Heider with two plows, 12-20 Heider, Wallis Cub, Parrett, Mogul. All in first-class shape. Indiana Triangle Motors Co., 155 Kentucky Ave., Indianapolis, Ind.

FOR SALE—One 20-H. P. double Nicholson & Shepard steam engine; one steel Case separator with wind stacker, feeder and weigher. In fine running order, price low. A. H. Parks, Minonk, Ill.

FOR SALE—Complete threshing outfit: Avery undermounted engine, 30-horse; Advance separator, 36x60. Used forty-five days. Complete, \$1500. J. E. Gustafson, Strool, S. Dak.

FOR SALE—Rumely OilPull tractor, 15-30, used four seasons, always shedded, \$750. Sanders Eight 28-inch disc plow, \$200. 500 gallon oil tank, \$50. G. E. Lee, R. 2, Pratt, Kans.

FOR SALE—30x50 Baker separator, four years old; has Heineke feeder, Peoria double tube weigher with swinging conveyor; in good condition. Melvin Jones, Lucerne, Ind.

FOR SALE—Wood Bros. engine; 22-horse Case steel separator; 32x54 Birdsell huller No. 8. This machinery is in first-class shape and priced to sell. Ernest Jones, R. 2, Montpelier, Ind.

FOR SALE—\$1800 takes complete Nichols & Shepard outfit. 20-H. P. engine, six seasons; 36x56 separator, five seasons; mounted tank, pump, hose. Elmer Curley, Box 85, New Bedford, Ill.

FOR SALE—16-H. P. Minneapolis steam engine; 32x54 Avery separator, threshed about 25,000 bushels, \$2800. Complete. A real bargain. Albert Henry, Platte City, Mo.

FOR SALE CHEAP—Two 20-horse direct flue Minneapolis traction engines. Plow gears have been rebuilt. \$1200 each. Inquire of Fred Habegger & Son, Jordan, Minn.

FOR SALE—25-H. P. Russell steam engine, run five seasons, in A-1 condition. One Albertson shock loader, nearly new. Will sell reasonable. Wm. Peitz, Perry, Okla.

FOR SALE—One 25-H. P. Reeves double steam engine; one 40x64 Rumely separator with extension feeder; one twelve-barrel steel tank on steel trucks. Priced to sell. W. C. Hinkle & Co., Halstead, Kans.

FOR SALE—Over 2,000,000 round "National" concrete fence posts, now on thirteen leading railroads. "Nationals" are manufactured, sold and guaranteed by A. E. Farmer, Franklin, Ind.

FOR SALE—20-H. P. Greyhound engine; 33x54 Port Huron separator and Enterprise sawmill. All nearly new and first-class condition. E. H. Peters, 112 Sheldon Ave., Grand Rapids, Mich.

FOR SALE—One 2½A Western sheller, like new, complete with three sections, 40-foot drag. Always been in good shed. Price \$425. Andrew Meisner, Raymond, Ill.

FOR SALE—Two Heider tractors 12-20 with three-bottom plows. Brand new. Price cheap. Four-hole Joliet corn sheller; 10-H. P. gas engine. Bargain. C. H. Sewart, Hollis, Kans.

FOR SALE—One 32x52 Racine separator and 16-H. P. Huber engine with water tank. In good running order. Price \$300. One Avery 32x60 separator, in good shape, \$275. Edw. J. Pishny, Cleburne, Kans.

FOR SALE—Case 26x46 and 40x62 separators, with all attachments, drive belts and extension feeders. Case 15-27 Moline Universal and Waterloo Boy tractors, nearly new. J. C. Nitsch, Oberlin, Kans.

FOR SALE—New Ottawa D sheller and 22x36 International thresher; used 12-25 Waterloo Boy; 8-16 Mogul and 15-25 Lauson tractors. Ventler & Klingebiel, Ashton, Ill.

FOR SALE—12-25 Avery tractor; one 12-20 Emerson-Brantingham; 16-30 OilPull; set of extension rims for 16-30 OilPull, Corn Belt No. 5 grinder; No. 10 Bowsher; some good steam engines and separators. F. E. Peterson, Kewanee, Ill.

FOR SALE—One heavy sawmill with one hundred ft. track and 35-ft. carriage, three bunks and a 35-horse stationery engine. This machinery has always been housed. Edw. Schneider, R. 4, Ann Arbor, Mich.

FOR SALE—One 20 Reeves, one 22 Minneapolis, one 18 Avery undermounted, one 30-60 OilPull, one 8-16 Avery; one 40x62 steel Case, one 32x54 Avery, one 32 x 54 Red River. Wm. Seyb, Donnellson, Ia.

FOR SALE—Breaking plows for brush and marsh lands from two 20-inch to four 24-inch gangs. Also five-bottom Avery self-lift, \$300. E. R. Vehrs, Nekeosa, Wis.

FOR SALE—Eighty acres of rich swamp land in Taylor County, Wisconsin; every acre can be drained. Will trade for good farm machinery. D. W. Newhouse, Kingston, Ohio.

FOR SALE OR TRADE—40-70 Flour City tractor. Can use large steam tractor or good three-plow tractor. Want compound cylinders for 60-H. P. Case, size 7¼x11x10. Edw. Gard, Goehner, Nebr.

FOR SALE—25 Russell and Case; 20 Reeves, Aultman & Taylor, Robinson and Russell; 18 Rumely, Huber and Minneapolis engines. Separators, etc. Inquire M. J. Alleman, 1005 S. 2nd St., Champaign, Ill.

FOR SALE—Case cylinder pulleys, 13½" and 16", two-inch expander. Wanted—Heineke or Finnegan hood. Trade Rumely 20-40 for larger tractor, Aultman-Taylor or Minneapolis preferred. James Bros., Prescott, Ia.

FOR SALE OR TRADE—Emerson 12-20 AA tractor, new, used for demonstration only. Will trade on 18-, 20- or 22-horse power traction engine. Priced right. Coffey & Irwin Impl. Co., Cumberland, Ia.

FOR SALE—Residence, blacksmith shop, fully equipped, electric power, plow work a specialty, wagon work, garage. Only shop of its kind in twenty miles. Good farming country. Write Chas. Anderson, New Bedford, Ill.

FOR SALE—Bidwell beaner, Buffalo Pitts separator, Port Huron wind stacker and Port Huron Merry-Go-Round bagger, fine condition. Write for prices and description. Syra Pierce, Middleville, Mich.

FOR SALE—35-H. P. Advance compound engine; 30-H. P. Minneapolis compound engine; two 40x62 Minneapolis standard separators, Garden City and Ruth feeders, Hart wings, belts, tanks, wagons, complete. Kohls Bros., Bellingham, Minn.

FOR SALE—18-H. P. d. c. Buffalo Pitts engine; 32x54 Wood Bros. separator; eight-roll Advance husker; No. 1 Birdsell huller; tank, wagon, etc. Write for particulars. Ralph Odell, Coldwater, Mich.

FOR SALE—One 20-H. P. Rumely engine; one 20-H. P. Gaar-Scott; one 25-H. P. Reeves. Separators—one 33x56 Gaar-Scott; one 32x56 Advance; one 32x54 Avery. All in good shape. Roy Vail, Clarksburg, Ind.

FOR SALE—New 28x46 Avery separator; 18-36 Aultman-Taylor tractor, new five-disc gang plow; five-bottom Avery two- or three-bottom Oliver; two tandem discs. All bargains. J. Livingston, Nebraska City, Nebr.

FOR SALE—20-40 Case tractor, 32x54 steel separator, self feeder and wind stacker, wagon bagger and weigher, A-1 condition. Bargain. Address Carl H. Borklund, 6339 Elizabeth St., Chicago, Ill.

FOR SALE—Minneapolis threshing rig. 20-H. P. direct flue steam engine, 40x62 separator with wing carriers, feeder, weigher and wind stacker. All in A-1 shape. Separator new last fall. Erik O. Storla, R. 1, Decorah, Ia.

FOR SALE—Minneapolis 32x56 separator with belts and all attachments. Threshed about fifteen thousand bushels, kept well covered and under shed. A bargain if sold soon. S. H. De Pue, Dundas, Ohio.

FOR SALE—Largest stock of secondhand machinery in Iowa. Engines, separators, feeders, stackers, shellers, shredders, etc. Everything for the thresherman. Write for late list. Dukehart Machinery Co., Des Moines, Ia.

FOR SALE—20-H. P. heavy duty Frick engine. New Aultman & Taylor 36x56 separator, complete. Run one season. Guaranteed A-1 condition. Ill health the reason for selling. R. L. Bottoff, Goshen, Ky.

FOR SALE—Case 80-H. P. engine, Case 40x62 steel separator, equipped with Ruth feeder, Peoria weigher with swinging conveyor, sixteen-barrel water tank. All guaranteed in A-1 condition. Price \$1800. Ill health reason for selling. E. S. Stout, Bement, Ill.

FOR SALE—One Reeves cross compound 32-H. P.; one Gaar-Scott double 20-H. P.; one Gaar-Scott single 22-H. P.; one Minneapolis separator, 40x62; one Minneapolis separator, 36x56; one Gaar-Scott separator, 40x64. J. C. Weatherford, Pleasant Plains, Ill.

FOR SALE—Complete threshing outfit: 18-H. P. D. Nichols & Shepard engine; 32x60 Aultman & Taylor separator with Garden City feeder, belts, drive belt and tank with wagon. All in good condition. \$1800. Thos. L. Cory, R. 1, Worthington, Ind.

FOR SALE—One Red River, 36x56, run sixty days; one Woods, 32x54, run eighty days; one 19-H. P. Minneapolis, price \$250; 18-H. P. Gaar-Scott, \$1000; one 25-H. P. Northwest, \$900; one 8-H. P. Cushman engine. T. J. Reinders, Mallard, Iowa.

FOR SALE—19-65 Port Huron Longfellow engine; 40x64 Port Huron Rusher separator, all complete; Big Four Joliet sheller with three-section chain drag. This machinery guaranteed A-1 condition. Ill health the reason for selling. Axel E. Younggreen, Paxton, Ill.

FOR SALE AT A BARGAIN—Two Case threshing outfits. 20-horse engine, 40x62 steel separator; 25-horse engine, 40x62 steel separator, Garden City feeders, Case weighers. Reason for selling, too much to look after. H. Sprague, Box 71, Terre Haute, Ind.

FOR SALE—Case 20-H. P. compound engine, 20-inch drivers, fine condition, with 32x52 New Minneapolis separator, Garden City feeder, weigher, wind stacker. Used very little; had good care. A bargain. The H. C. Hart Implement Co., La Crosse, Wis.

FOR SALE—One complete threshing outfit consisting of one 30-60 Aultman-Taylor tractor, one 40x60 Rumely separator with Garden City wing feeder. Everything in first-class shape; good territory to thresh in. Write or see August J. Hinz, Box 54, Wood Lake, Minn.

FOR SALE—Complete Rumely rig. 25-45 OilPull with extension rims and 36x60 Rumely Ideal separator with wing feeder, weigher and grain saving blower attached. All in good running order. Priced at \$2500, cash or terms. C. L. Williams, R. 3, Box 41, Manchester, Ia.

FOR SALE AT WRAY, COLORADO—Cheap—Avery 30-H. engine, 36x70 separator. At Blackwell, Oklahoma—Gaar-Scott 22-H. P. engine, Canadian boiler, 36x60 separator, tanks and cook cars. Machinery always shedded. Will trade for land. E. V. Ball, 916 W. Padon, Blackwell, Okla.

FOR SALE—Aultman-Taylor 36-inch separator, threshed six companies, excellent condition. Twelve-barrel steel tank hose, pump and truck, like new. Concrete post business taking entire time. Also, having sold engine will sacrifice on above. See post advertisement. A. E. Farmer, Franklin, Ind.

FOR SALE OR TRADE—One 15-H. P. Case engine; one 10-20 Mogul tractor; one 12-H. P. I. H. C. portable gasoline engine; one 28-inch Nichols & Shepard separator, complete; one 24-inch Geiser separator, complete; one three-bottom Oliver tractor plow. Colby & Spitler Co., Hart, Mich.

FOR SALE—One 25-45 and one 30-60 Rumely OilPull; one 10-20 Mogul; one 10-20 Bull; one 18-H. P. Advance engine; two 32x52 Rumely separators; one 30x53 Reeves separator; one 20x32 New Racine; two No. 6 Birdsell hullers; one six-roll Advance husker. Gus. Hohenbrink, Box 64, Kalida, Ohio.

FOR SALE—25-H. P. double cylinder, simple, Ohio special Reeves steam engine three years old. Emerson 14-inch, six-bottom plow, plowed forty acres. Nichols & Shepard tank wagon. Reeves 36x60 separator, five years old. Joliet corn sheller, three years old. Fiedler Bros., Thomasboro, Ill.

FOR SALE OR TRADE—Forty-six steam engines from 15- to 35-H. P. Different makes. Eight gas tractors, I. H. C., Reeves, Avery, Flour City, 12- to 40-H. P. Belts and fittings. Largest stock in Northwest. Write for sizes and prices. Baldwin & Green, Sioux Falls, S. Dak.

FOR SALE—Steam engines: Reeves, Advance, Russell, Case, Huber, Rumely, Jumbo, Gaar. All standard makes of separators; new Minneapolis engines, threshers, tractors on display. Write for list and prices. Marth Thresher & Supply Co., 422 North Main St., St. Louis, Mo.

FOR SALE OR TRADE—Small upright boiler; 32x54 Aultman-Taylor parts; 16-Huber parts. Wanted—boilers from 8 to 25. Governors, safety valves, injectors, 3800 truck, six-cylinder Glide touring car, Ford roadster, J. I. Case 15; Peerless 18. J. N. Britz, Aurora, Ill.

FOR SALE—One 20-40 Rumely OilPull tractor; one 32x52 Advance Rumely separator; Garden City feeder; one oil tank and truck; two P & O triple gangs, plow hitch and engine guide. All new and complete. Address H. G. Young, Doniphan, Nebr.

FOR SALE—18-H. P. Baker engine, No. 501, in A-1 condition; 33x56 Baker separator, used two seasons, like new, in A-1 shape; eight-inch, four-ply, 150-foot drive belt, sixteen-barrel steel tank and wagon. All ready to work. \$1600 takes outfit. E. A. Bordner, 120 E. First St., Auburn, Ind.

FOR SALE—Big Four 30 kerosene burner with six-bottom automatic lift stubble plow; 40-80 H. P. Gaar-Scott gas tractor; 40x62 Humming Bird separator, extension feeder, Hart weigher with blower, Finnegan hood. This machinery is in good shape, no scrap. I run it myself. A. L. Schnirring, Waltham, Minn.

FOR SALE—One J. I. Case 36x58 steel separator, complete with all belts, ready to run. Price \$500. One Maytag eight-roll shredder, ready to run. Price \$200. If taken by June 1, 1921, these bargains are worth looking after. Come and see for yourself. A. E. McCallister, Maquoketa, Ia.

FOR SALE—One latest Model D Moline Universal tractor, complete with plows, etc. Brand new, only used a little for demonstration. As we have decided to discontinue our implement department will sell this machine at less than wholesale price. A big bargain for someone. For further particulars, write Wm. Rutzen, Mgr. Impl. Dept., Glenwood City Equity Co., Glenwood City, Wis.

FOR SALE OR TRADE—One All-Work 14-28, \$500. One All-Work 14-28, \$600. One International 8-16 with ten-foot power binder, nearly new, \$1100. One Bradley three-bottom, nearly new, \$75. One Oliver three-bottom, \$100. One Ottawa D sheller, slightly used, \$600. Want late Ottawa C sheller, also late model Wallis, 15-25. Emil Harding, Lowell, Ind.

FOR SALE—One 18-H. P. Gaar-Scott s. c. engine. One 22-H. P. Gaar-Scott s. c. engine. One 18-H. P. Rumely engine. One 20-H. P. Advance engine. One 12-H. P. International kerosene burning engine on trucks. One 32x50 Aultman-Taylor separator. One 34x56 Aultman-Taylor separator. One 12-20 OilPull, used one season, rebuilt. The Rumely Service and Sales Co., Windfall, Ind.

FOR SALE—52½ acres, clay loam, twelve acre woodlot and pasture. No waste land, fair buildings and fences, some fruit. Three-fourths mile to school and grange, two miles to market, seven miles to county seat. Priced right for quick sale on account of health and age. Also have Bronze turkey eggs, \$6 per ten; Toulouse goose eggs, 40 cents each; Pekin duck eggs, \$2 per eleven. John B. Wells, R. 1, Box 46, Coldwater, Mich.

FOR SALE—Cheap if taken soon. One Russell separator with high grade 40x64, wind stacker, Garden City wing feeder, Gardner weigher with swinging conveyor, Hansmann steering pole. Separator has steel deck, water tight, up-to-date concaves. One set common, also two for hulling clover. Belts good, paint good, always well shedded and the best of care. All ready for the field without any repair. If interested, write Frank D. Morrill, Janesville, Minn.

FOR SALE—One 40-80 Avery tractor; one 36x60 Rumely separator; one 36x60 Cape separator; one 15-30 International tractor; one 18-36 Aultman-Taylor tractor; one 36x60 Nichols & Shepard separator; one 12-25 Waterloo Boy tractor; one 16-H. P. compound Reeves engine. For particulars write A. C. Kelso, 206 E. Kent St., Streator, Ill.

FOR SALE—19-H. P. Port Huron engine; 36x60 Port Huron separator, complete outfit; 19-H. P. Port Huron engine, 32x52 Nichols & Shepard separator; complete outfit, 20-H. P. Advance engine, 36x60 Avery separator, Ottawa C sheller, Marvin drag wagon, No. 6 Birdsell huller. Write for prices. John Hauter, Tiskilwa, Ill.

FOR SALE—Get our prices on canvas drive belts, rubber drive belts, tank pumps, hose, oils, greases, oil pumps, canvas covers, brass goods, pole saw frames, cutoff saw table, steel water tanks, oil tanks, etc. We can save you money and give you best grade supplies. Write for complete price list. C. N. Wonderlic Sales Agency, Port Huron, Mich.

FOR SALE OR TRADE—16-H. P. Aultman & Taylor, 20-Case, 20-Rumely, 25-Russell, and Rumely, Case, Nichols & Shepard, 20-Pitts, Avery, Minneapolis, separators, 24" to 40" machines. Rebuilt clover hullers No. 6 and No. 9. Also have 40-80 Avery, 40-80 Minneapolis, 30-60 Aultman & Taylor, 16-30, 20-40 OilPull, tractors. I guarantee all machinery and have the latest and best used machinery offered. Look this over if interested. C. A. Wiegner, Donnellson, Ia.

FOR SALE—19-H. P. Port Huron engine, 22-H. P. Port Huron engine, twelve-ton Port Huron steam road roller, 16-H. P. Port Huron compound engine, 16-H. P. Russell compound engine, 16-H. P. Nichols & Shepard traction engine, 14. H. P. Peerless engine, 32x52 Nichols & Shepard Red River Special separator, 32x52 Gaar-Scott separator, 17x22 Wolverine hay press (wood frame), continuous cement mixer, planer and matcher, saw mill. In first-class condition and bargain prices. Write for complete list. C. N. Wonderlic Sales Agency, Port Huron, Mich.

FOR SALE—Three 20-H. P. Reeves double engines, simple type; run from three to six years. Two have been used only for threshing. Also three Aultman & Taylor separators, complete, equipped with Garden City feeder, one Peoria weigher and two Hartley weighers. All have swinging spouts. Three complete rigs. In extra good shape—canvasses, jack screws, pitchfork and ten gallons of oil with each rig. Also all the necessary tools and water tanks. Two engines have tenders. Choice of rigs, \$2500. Terms to suit. Write L. Angspurger, 507 E. Grove St., Bloomington, Ill. Better come and see this machinery. It will please you.

FOR SALE—Engines, two 18-horse Class U Peerless; one 18-horse Nichols & Shepard; one 16-horse Huber; all good ones. Tractors—one 8-16 Advance-Rumely with 2-14" plows, all in excellent condition. New Minneapolis tractors, all four sizes. Separators—one 32x54 Avery; one 33x56 Baker; one 33x56 Robinson; one 33x52 Gaar-Scott. All fully equipped and at a bargain. One Belle City silo filler, good condition. One No. 1 Rosenthal corn husker. Distributors for Rosenthal corn huskers and silo fillers and the great Minneapolis line of threshing machinery. The Daffer-Moser Co., Richmond, Ind.

FOR SALE—At greatly reduced prices—Best quality, cash with order only. Three 100-foot, seven-inch, four-ply endless rubber, \$68 each. Two 75-foot, eight-inch, four-ply endless rubber, \$50 each. Four 125-foot, seven-inch, four-ply endless canvas, 30-ounce duck, \$44 each. Five 150-foot, seven-inch, four-ply endless canvas 30-ounce duck, \$52 each. Ten 150-foot, eight-inch, four-ply endless canvas 30-ounce duck, \$58 each. 300 feet 4½-inch Standard leather belt, 52c per foot, 200 feet six-inch Standard leather belting, 72c per foot. 300 feet five-inch high grade rubber belting, 45c per foot. 250 feet six-inch, four-ply high grade rubber belting, 55c per foot. 200 feet seven-inch, four-ply high grade rubber belting at 65c per foot. Three Gardner double tube weighers, swinging conveyors, \$80 each. Economy Supply Co., 902 S. Washington St., Peoria, Ill.

FOR SALE—28x46 steel Case, Frick Westinghouse, Huber, Williams, an Batavia threshers. Frick, Pitts and Huber engines, bean threshers, sawmill. Complete outfit, nearly new, Frick engine, Red River special thresher. New Westinghouse threshers, Buller couplers, Vacuum pulleys, thresher supplies. Some bargains. Harry P. Kellogg, Box 43, Rochester, N. Y.

FOR SALE—One Case 25-H. P. Canadian engine No. 32838, cab, contractors bunker; Case 28x50 separator No. 62370, blower, weigher, feeder, fourteen-foot extension; Case twelve-barrel steel water tank and steel trucks, drive belt and all others. Outfit used about sixty days, in A-1 condition. Located at Clayton, Kansas. Price \$3200. One 20-H. P. Reeves simple engine No. 4350, double geared high pressure boiler; Reeves fifteen-bar, 36x60 separator, No. 7369, blower, feeder, weigher, drive belt and all others. Good, used three seasons, A-1 condition. Price \$3000. Located at Carthage, Mo. One-half interest in Ennis Transfer & Storage business, including two 2½-ton trucks. Located at Carthage, Mo. Will make some terms or might trade some on any of the above property or sell working interest. C. O. Rankin, 310 Orchard St., Carthage, Mo.

MISCELLANEOUS

WANTED—Improved Morris beading tool. Glen Maulsby, Lebanon, Kans.

WANTED—Secondhand side blower for 54 Huber. J. Kubesh, Beroun, Minn.

WANTED—Buckeye traction ditcher. M. H. Crates, Jenera, Ohio.

WRECKING—Hart-Parr 60, also Little Devil. Dale, Coldwater, Kans.

TO SELL machinery or other property write, C. C. Shepard, Minneapolis.

WANTED—A short log sawmill. J. E. Casebeer, R. 1, Poland, Ind.

WANTED—80-H. P. Case. F. R. Kurtzbein, Montevideo, Minn.

WANTED—Extension rims, 76x12, for Gaar-Scott. H. B. Johnson, Herman, Minn.

WANTED—Secondhand extension rims for Fordson tractor. F. M. Valek, Lonsdale, Minn.

FOR TRADE—Hupmobile touring for threshing, baling or shelling outfit. S. A. DeFreece, Sidney, Ia.

WANTED—One No. 4402R, 64-tooth, five-inch face master gear for Reeves, also clutch. R. M. Page, McLeansboro, Ill.

WANTED—Twin City 60-90 tractor and large Avery or Rumely separator. W. F. Schlereth, Jetmore, Kans.

WANTED—To trade 12-25 Avery, good as new, for 18-36 Avery. Need more power. Gus Steinke, Toluca, Ill.

BARGAIN—New Ford car tractor attachment. G. S. Lawrence, Hillsdale, Okla.

WANTED—Secondhand wind stacker. Mablebay, 60" separator. Cris. Hammer, Ellinwood, Kans.

WANTED—No. 8 Bowsher feed mill. Condition and price must be right. H. K. Helgeson, Minneota, Minn.

WANTED—To hear from owner of good farm for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

BOILER TUBES AND BELTING. Ship anywhere. Get prices. Acme Boiler Works, Dover, Tusc. Co. Ohio.

WANTED—22-horse Avery undermounted engine. State condition and lowest price. Ed Peterson, Grand Meadow, Minn.

WANTED—To hear from party having medium sized threshing outfit to trade on forty or eighty acres of first-class farm land. D. C. Addicks, R. 6, Lagrange, Ind.

BOILER TUBES—Boiler Tubes—Secondhand and new. High grade used tubes. Cut to length. Ship anywhere. Get prices. Harris Machinery Co., Minneapolis, Minn.

LARGE SECONDHAND GAS TRACTOR wanted—Give cash price. Geo. Case, Altamont, So. Dakota.

WANTED—Drive wheels for 1912 International 25-45 Titan tractor. Lewis Stirn, Woodlawn, Md.

REBUILT SAWMILL, cider press, boilers, steam and gas engines. Roberts Machine Co., East Palestine, Ohio.

WANTED—No. 9 Birdsell huller. State condition, equipment. Cash price. J. W. Norvell, Perryville, Ky.

WILL TRADE Wisconsin drained land for livestock or machinery. H. Lauterbach, Earlville, Ill.

WANTED—To hear from party having farm for sale. Give particulars and lowest price. John J. Black, 237th St., Chippewa Falls, Wis.

BELTS COST MONEY—Have your canvases threshing belts spliced. Money back, guaranteed job. Write for prices. Geo. B. Teets, Milledgeville, Ill.

THRESHER BELT BARGAINS—Greatly reduced prices. Highest grade endless belts, all sizes and lengths. Fully guaranteed. Prices way low. Harris Machinery Co., Minneapolis, Minn.

RUMELY OILPULL BELT GUIDE and throw—is mounted on clutch arm. Saves belt and limbs. Operator can throw belt from cab. Wm. Penn Jones Impl. Works, Minneapolis, Minn.

WHO HAS A GOOD RUMELY or Port Huron separator to trade for a 20-H. P. Port Huron engine, 32-inch or larger? Separator must be in good shape. J. R. Weaver, Oronogo, Mo.

CORDWOOD SAWS—Cordwood Saws—26-inch, \$6.40. 28-inch, \$7.40. 30-inch, \$8.40. Guaranteed saws. Saw frames. Mandrels. Belting. Everything. Harris Machinery Co., Minneapolis, Minn.

I HAVE TAKEN MY 40-80 AVERY motor down, No. 1172, and I am offering all parts for sale at the right price. \$15 takes a Peoria weigher and cross conveyor. Louis Sykora, Jeffers, Minn.

WANTED—To exchange in trade for smaller separator, looks like new—Minneapolis 40x72 separator for 32-inch steel separator. Wm. Kase, Altamont, So. Dak.

SUCTION HOSE—Tank Hose Bargains—Two-inch rubber covered, 15-foot, \$4.00. 20-foot, \$5.25. Canvas covered, 20-foot, \$7.50. Harris Machinery Co., Minneapolis, Minn.

KENTUCKY TOBACCO, natural leaf, smoking, ten pounds, \$2.50; twenty pounds, \$4. Chewing, ten pounds, \$3; twenty pounds, \$5. R. F. Veal, Agent, Sedalia, Ky.

IF YOU WANT to sell your separator, tractor or any other machine you have, let us sell it for you. We charge only 10%. Send description and price. Newby Machinery Co., 203 Hilgenberg Bldg., Indianapolis, Ind.

TANK UP YOUR TRACTOR as quickly as at a filling station. Pneumatic system. For wagon tanks, steel and wood drums. No buckets, cans or funnels. No dust, dirt and water. Parcel Post, \$12.75. The Buckeye Co., Thornville, Ohio.

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WANTED—Small repair sheller for 40x66 Huber. 16-H tar, \$325. Albert Jones, Stratford,

WORK WANTED—Expert boiler welding. Don't scrap that engine. Cracks, bulges, patches, staybolts; work guaranteed. Will call anywhere. Make dates now. Wire or write. A. A. Koch, Albert Lea, Minn.

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	Four Ply	50 Ft.	75 Ft.	100 Ft.	125 Ft.	150 Ft.
5"	\$14.70	\$21.30	\$28.20			
6"	17.10	24.90	33.00	\$40.80		
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For five-ply add 25% to above prices. For six-ply add 50% to above prices.

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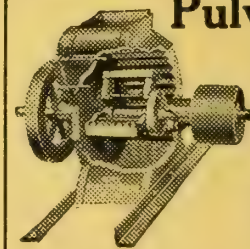
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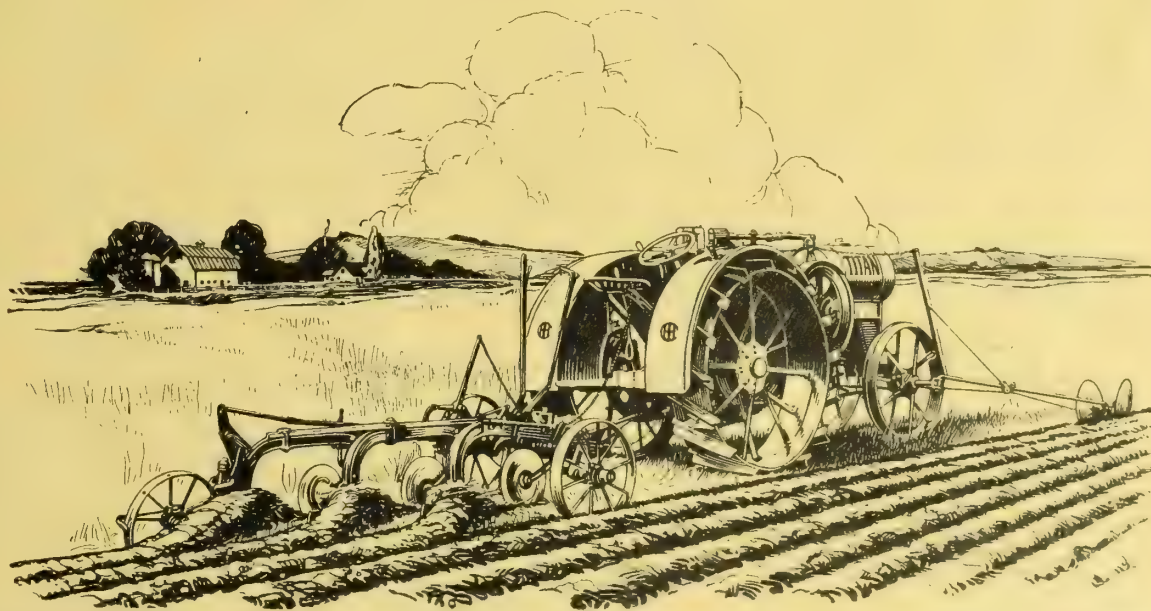
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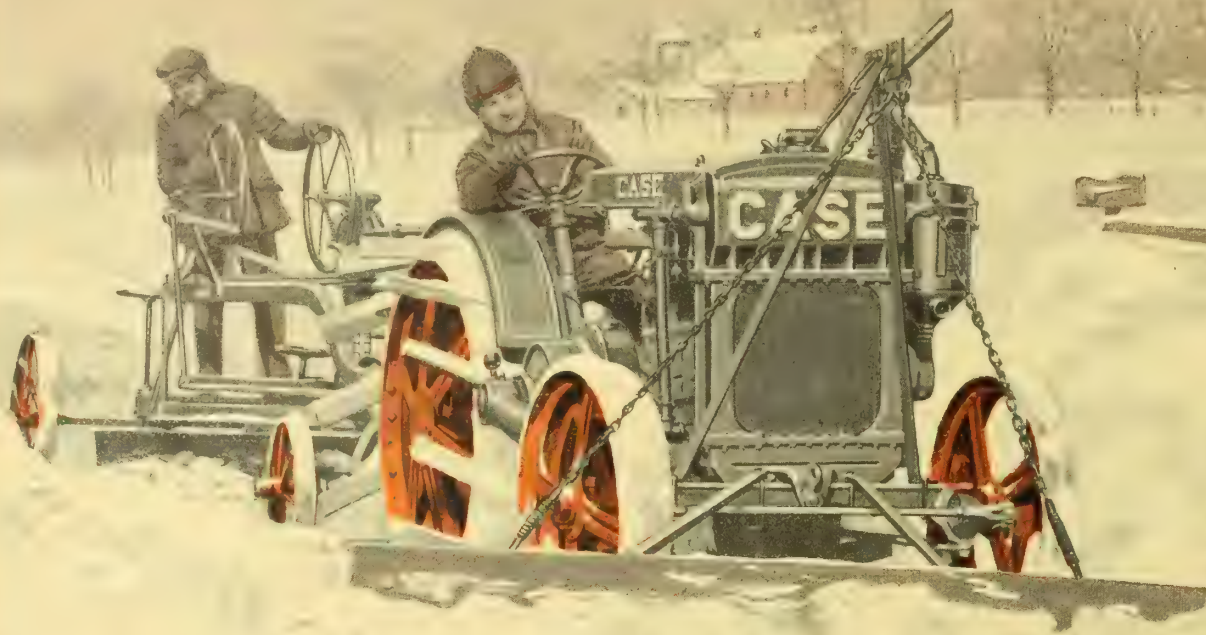
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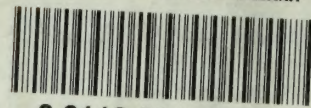
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